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ABSTRACT

This report focuses on the research aspects of the Equipped for the Future (EFF) project that works toward system reform for adult literacy and lifelong learning. Section 1 describes the EFF process 1993-97, the impetus for EFF, and approaches to system reform. Section 2 explores the research processes EFF uses to build a framework that could support system reform. Section 3 discusses the following conceptual threads that shape the EFF framework: (1) purposeful view of learning; (2) rooting of education in the context of lives; (3) application, not possession, of skills; and (4) adult development as transformation. Sections 4-6 describe processes used and sources of data collected to create the framework. Assumptions guiding the research are examined, and the credibility and significance of findings are discussed in terms of both theory and practice. Section 4 focuses on consulting with adult learners to determine purposes for learning. Section 5 addresses mapping the roles of effective citizens, workers, and parents. Section 6 discusses identifying key skills and knowledge of effective role performance. Section 7 reviews the following two main areas in which EFF has important implications: (1) contributions to the integration of theory and practice; and (2) commitment to a participatory process for system reform. Four appendices are included: (1) Planning Projects, 1995-96; (2) Structured Feedback Process, 1996-97; (3) Documentary Sources for Skills and Knowledge Database, 1997; and (4) EFF Generative Skills Descriptions (revised, May 1999). (Contains 38 references). (YLB)

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EFF TECHNICAL REPORT

Equipped for the Future Research Report

Building the Framework, 1993 – 1997

By Juliet Merrifield

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March 2000

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Preface

I DECLARE AN INTEREST IN EQUIPPED FOR THE FUTURE (EFF). From the time in 1993 when I first heard about the learner consultation, this project has seemed exciting and innovative to me. The Center for Literacy Studies (CLS), where I worked at the time, helped distribute the discussion guidelines to programs in Tennessee, and encouraged them to get their students writing. Later I was to play a small role during the planning year, when CLS, led by my colleague Brenda Bell, was one of eight EFF planning groups. After I left CLS in the summer of 1996, I was asked to synthesize data for the citizen role from across the planning projects. CLS has continued to play an important role in EFF's development, which I have only watched from across the ocean in England.

My role in writing this research report was not to pretend to be a completely independent observer. My early involvement in the EFF research gave me a particular perspective, not just a reporter's but a synthesizer's. I am pleased to have been invited to develop this first research report, not least because it gave me an excuse to find out what has happened since I left the U.S. I have not been disappointed. EFF has held to its early promise to offer a new way of thinking about adult education. It has, perhaps uniquely, managed to work in a participatory way with the field at the same time as promoting leading-edge development. It has given practical focus to newer theories about learning and adult development. The expansion and growth of interest, support, and involvement from across the country testifies to the power of an idea and the value of participation.

In preparing this report I have had access to all the project's internal documents. I also interviewed, in person or by phone, the staff leading each of the role development efforts and many of their colleagues who were involved in structured feedback and coding data. Four years' work yielded a lot of paper. Inevitably during that time the conceptions of the task were refined and definitions clarified. I have tried to show these changes over time without making the report too difficult to follow.

The report could not have been done without the guidance of Sondra Stein as the National Institute for Literacy's project director of EFF; Brenda Bell, Associate Director at the Center for Literacy Studies at The University of Tennessee/Knoxville and coordinator of the citizen role work; Lisa Levinson, project director at the Center for Adult Literacy and Learning at the University of Maine and coordinator of the worker role; and Meta Potts of the National Center for Family Literacy and coordinator of the parent and family member role. Professor Hal Beder of Rutgers University Graduate School of Education and Dr. John Comings of the National Center for the Study of Adult Literacy and Learning, Harvard University kindly commented on an earlier draft. Errors that remain are mine.

—Juliet Merrifield, October 1999

Introduction

THE EQUIPPED FOR THE FUTURE (EFF) PROJECT of the National Institute for Literacy (NIFL) is working toward system reform for adult literacy and lifelong learning. At its heart lies a clear vision of what adults need to know and do in order to fulfill their roles as citizens, workers, and family members.

Through EFF, NIFL has sought to build consensus on the 'big picture' guiding policy and practice, and to develop content and performance standards that link the classroom with individual and societal expectations. The goals are ambitious: to shape an education system whose goal is not to remedy deficiencies from earlier educational experiences, but

> *"to prepare adults for the future—to build on what they have already learned through experience as well as formal education, to prepare them for new, unanticipated responsibilities in the present, and to provide them with the tools to enable them to continue to learn."* (Stein, 1997: 1).

This report focuses on the research aspects of EFF—the process of gathering and analyzing data to create, refine, and validate the framework from 1993 through the summer of 1997. EFF is not simply a research project, although the framework is based on original research: from the beginning it has sought both to create a new framework for adult literacy education and to develop organizational support for it.

The purpose of this report is to document the research conducted through the summer of 1997 and the concepts and theories involved. It focuses less on the products (which are detailed in a series of other reports – Stein, 1995 and 1997; NIFL, 1998), than on the process—on what was done and why. But in examining the process, certain themes become evident:

- **EFF Integrates Theory and Practice**
  - —EFF builds on and contributes to the growing body of approaches to learning as a purposeful act—not decontextualized and value-free, but embedded in particular purposes and specific contexts.
  - —EFF's focus on the application rather than the possession of skills and knowledge is a contribution to adult education—following in a long tradition that needs to be revived.
  - —The EFF project represents the first time there has been a concerted attempt to map the major adult roles. Although a great deal of work had been done around the worker role, through SCANS, O*NET, and the occupational skills standards, much less had been done on the citizen and parent/family member roles.
- **EFF Takes an Iterative Approach to Theory Building**
  - —The process of EFF has been one of the most extensive consultation and participation processes ever carried out in adult education.
  - —EFF staff have tried to keep a holistic view of where the project is going while at the same time working intensively on small pieces of the framework. Responsiveness to constituents who have some stake in the outcome means the whole is always being modified by the development of the parts. EFF adopted this iterative approach in order to generate system reform that would be credible and acceptable to the field of practice, to stakeholders, and to policymakers.

EFF's most significant accomplishment has been to shift thinking about the purpose of adult

EFF's most significant accomplishment has been to shift thinking about the purpose of adult education.

education. From a conception that adult education's work is to replicate K-12 education and teach knowledge and skills that are autonomous and independent, EFF has pushed us toward thinking of adult education as preparing people for the future by teaching integrated skills and knowledge needed to be more effective workers, parents and citizens. Equipped for the Future has been a unique and remarkable effort to model adult education for the next century.

The EFF Process 1993-1997

The EFF initiative began with an invitation to adult learners to help shape adult education policy by writing about what Goal 6 of the National Education Goals meant to them.[1] This primary goal for adult literacy and lifelong learning states:

> *"By the year 2000, every adult American will be literate and will possess the knowledge and skills necessary to compete in a global economy and exercise the rights and responsibilities of citizenship."*

Learner consultation was the first step in an effort to make Goal 6 a real guide for the literacy field, one that clearly describes what it means to be literate, to compete in the global economy and exercise the rights and responsibilities of citizenship. This consultation shaped the first stage of Equipped for the Future (1994-1996), the development of a framework for standards-based system reform. In subsequent work to develop the framework, EFF consulted with a wide range of stakeholders to validate the four overarching purposes for learning identified from the learner consultation. During this planning year, projects also developed guiding principles for the work and for the standards to be developed.

The second stage of EFF (1996-1998) was developing the content standards. Planning projects conducted research to identify what adults need to know and be able to do in order to perform effectively their key life roles as citizens, workers, and parents, and used this research to develop and validate "role maps." These were linked with skills and knowledge identified from literature reviews. Common elements across the roles, including activities, skills, and knowledge, formed the basis for content standards, which were then field tested by 25 local field development partners.

In the third, and current, stage of work (1998-2001), EFF is developing the performance continuum for these standards. The process of testing and refining content standards and performance levels will be the subject of future research reports.

The Impetus for EFF

A series of critical studies in the early 1990s highlighted the need for fundamental reform of adult literacy education. Successive reports revealed the significant need for literacy education services, the inadequacy of the present basic skills system, and the lack of agreement on vision. NIFL responded to all three issues in EFF.

The National Adult Literacy Survey (NALS) showed almost half of adults in the U.S. possessed literacy skills below the threshold of successful adult performance (level 3 on the NALS five-level scale). Performance at the lowest levels was highly correlated with poverty and underemployment (Kirsch et al., 1993). The International Adult Literacy Survey compared literacy in eight industrialized countries and demonstrated that the US had the highest percentage of workers scoring at the lowest literacy levels (Fellegi and Alexander, 1995).

The National Evaluation of Adult Education Programs pointed out inadequacies in the system intended to address adults' skill needs: most learners stay in programs a very short time; those who stay

To enhance the effectiveness of the adult education system NIFL had to work with the field to identify and agree on those goals.

may make initial small learning gains, but not a lot of long-term literacy skills gains (Young et al., 1995). In the same year, the General Accounting Office reported to Congress that performance data from adult programs are unreliable and incomplete (Weiss, 1995). It noted both practitioners and researchers distrusted the most commonly used tools for measuring performance and progress.

The GAO was particularly concerned about the difficulties in evaluating the effectiveness of a system whose objectives are not clearly defined. The 1966 Adult Education Act, which regulated the field for over 30 years, had a broad and loose vision, as the GAO summarized it:

> *"to improve educational opportunities for adults who lack literacy skills necessary for effective citizenship and productive employment ...to encourage the establishment of adult education programs for adults to (1) acquire basic skills needed for literate functioning, (2) acquire basic education needed to benefit from job training and obtain and keep productive employment, and (3) continue their education to at least the secondary school level."* (Weiss, 1995: 14)

There was no agreement on the meaning of "literate functioning," or on the literacy skills "necessary for effective citizenship and productive employment."

NIFL was charged by Congress with measuring and tracking the progress of the nation in meeting Goal 6 of the National Education Goals. While the NALS provided a profile of the literacy skills of the population, there was no consensus on what literacy skill adults *need*. Goal 6 presented not just a technical challenge in terms of measurement but a conceptual problem—what does it mean to be literate? If NIFL's mission was to enhance the effectiveness of the adult education system in meeting its goals, then NIFL had to work with the field to identify and agree on those goals.

Approaches to System Reform

EFF builds on a substantial body of earlier work on quality and continuous improvement in the private sector, reinventing government and performance accountability efforts in the public sector, and standards-based educational reform. All of these have in common a focus on results as the driver of system reform.

Private sector: Total Quality Management (TQM) and related approaches to quality and continuous improvement have spread widely in the business world. In contrast to traditional approaches to quality control, which monitor results at the end of the production process, in TQM results are monitored at each stage of production. Improving production processes depends on a clear understanding of desired results, detailed analysis of each step in the production process, and continuous feedback on how each impacts results (see, for example, Deming, 1986; Senge, 1991; Stagg, 1992; Stein, 1993). Continuous improvement efforts involve workers in monitoring inputs and outputs, assessing quality, and evaluating production.

Performance accountability in government: Government reform initiatives began at the state level in the 1980s. Oregon mounted an initiative that engaged citizens and organizations throughout the state in consultation about goals and benchmarks for government (NIFL, 1995a). Performance accountability later spread to the federal level, spurred on by Osborne and Gaebler's book, *Reinventing Government* (1993). Government reform, like TQM in the business world, emphasizes "customer" needs, clarifying and agreeing on desired "results," and measuring "return on investment." (Behn, 1993; National Governors' Association, nd; Brizius and Campbell, 1991)

Standards-based educational reform: Recent educational reform, initiated by *A Nation at Risk*,

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Comprehensive system reform requires aligning the whole system—teaching, staff training, assessment, and reporting—to achieve better results.

the 1983 report of the National Commission on Excellence in Schools, has focused on the content of education—what should be taught and learned, and what should be assessed. As states moved to upgrade their core academic requirements, President Bush and state governors launched a national movement for developing content standards in key subjects, and consortia of scholars and teachers began considering what was most worth learning (Gagnon, 1995). The first of these efforts was independently initiated by the National Council of Teachers of Mathematics. (National Council of Teachers of Mathematics, 1991; Romberg, 1993)

Educational standards identify the end results of teaching and learning. Efforts to develop standards for kindergarten through grade 12 (K-12) are quite diverse but share some characteristics. They are subject-based—the aim is to clarify and agree on a body of knowledge that should be mastered—and their main architects have been teachers and academics within that subject area. They identify what an educated high school graduate should know.

Occupational skill standards: These started outside of education, driven by business needs of employees for particular skills and attributes. The SCANS report, *What Work Requires of Schools* (Secretary's Commission on Achieving Necessary Skills, 1991) was followed by development of occupational skills standards that identify skills and knowledge needed for particular job clusters. Again, the method was to focus on desired results as a means of increasing effectiveness.

The 22 occupational skills standards projects chose divergent paths, and used different terms and formats, but with some common approaches. They all started with the "customers" (however defined) and their needs, so that the purpose for the standards was clear. All involved stakeholders in development and feedback. All focused on performance of tasks rather than mastery of content knowledge.

Standards, whether educational or occupational, are intended to bring about system change, but they do not do so alone. Clarifying and agreeing on the desired results of education is the first step. Comprehensive system reform requires aligning the whole system—teaching, staff training, assessment, and reporting—to achieve better results.

In planning EFF, NIFL also drew on its own experience in systemic change in adult education through its Performance Measurement, Reporting, and Improvement System (PMRIS) initiative in the early 1990s (NIFL, 1995a and 1995b). Five state-level performance accountability projects supported by NIFL worked to develop interagency agreement on shared outcomes for the adult education and employment training system and on common reporting systems that would enable these results to be tracked. The experiences of the PMRIS states highlighted for NIFL the importance of combining accountability work at the policy level with bottom-up work at the class and program level (Swadley and Ziolkowski, 1996).

NIFL recognized that system change had to involve the whole system. EFF needed to work at the national level, with partners and allies having common or connected policy interests. But it also had to work at the local level, with program administrators, teachers, and students, to ensure that reform was practical and applicable. EFF needed to create a "big picture" that linked teaching and learning with broad social purposes for education. Creating that picture had to start with "customers," stakeholders and practitioners.

EFF's Approaches To Research

EQUIPPED FOR THE FUTURE'S APPROACHES to research have been shaped by the purpose that inspired that research. Because the task was to create a framework that could support system reform, the research processes used to build that framework had to be both transparent and inclusive:

- The need to look outside the field for guidance on defining the ultimate, social purposes of education, meant that a broad range of people were consulted in the research phases.
- The need to work simultaneously at the policy level (on accountability systems) and at the program level (on teaching and learning) meant that the research had both to gather new data and to link it with existing policy and program tools.
- The need to make the new framework practical and comfortable for teachers meant that local programs had to be involved in creating it.
- The need to generate and profit from broad support meant that each stage had to be iterative: gathering information, processing it, presenting it for feedback, and revising it.

EFF's iterative approach has much in common with "grounded theory"—"the discovery of theory from data, systematically obtained and analyzed." (Glaser and Strauss, 1967: 1) This approach to generating theory results in concepts (or categories) and hypotheses (or relationships between categories) that are drawn from the data but have a life beyond it. The acid test is the usefulness of the theory proposed. In their formulation of "grounded theory" Glaser and Strauss say:

> *In discovering theory, one generates conceptual categories or their properties from evidence; then the evidence from which the category emerged is used to illustrate the concept. The evidence may not necessarily be accurate beyond a doubt (nor is it even in studies concerned only with accuracy), but the concept is undoubtedly a relevant theoretical abstraction about what is going on in the area studied. Furthermore the concept itself will not change, while even the most accurate facts change. Concepts only have their meanings respecified at times because other theoretical and research purposes have evolved. (ibid.: 23)*

Grounded theory can use different research methods, but is particularly suited to qualitative methods, such as those used in EFF, because of their rich depiction of human beliefs and actions in social and cultural contexts. Within the broad field of qualitative research methods, EFF drew primarily on naturalistic approaches. Guba and Lincoln describe the naturalistic approach to evaluation: it "moves through several iterations; it makes credibility checks possible at each stage and invites negotiation on points of difference." (Guba & Lincoln, 1982: 381) EFF's research has been

EFF's research has been staged, with each stage involving input from as wide a range of people as possible, and each set of working hypotheses has been re-presented for review, revision, and acceptance.

staged, with each stage involving input from as wide a range of people as possible, and each set of working hypotheses has been re-presented for review, revision, and acceptance.

In qualitative research, rigorous internal procedures are an essential requirement for trust in the inquiry's outcomes. These are somewhat different from the conventional requirements for rigor in quantitative research methods—internal and external validity, reliability, and objectivity. In qualitative research the central question is of "truth value" (Guba and Lincoln, 1982)—whether the findings are credible to other researchers and to the sources or subjects of the research themselves. Credibility with the sources requires that findings be presented to them for validation, which EFF has done. Credibility with other researchers requires openness about research methods and adoption of techniques to strengthen factual accuracy, such as triangulation (checking data from different sources against each other) and cross-examination (repeated observations over time), which EFF has also maintained.

The end purpose of practical application means that EFF's research also has drawn on action research traditions and more recent cooperative inquiry (see Reason, 1994, for a summary of these approaches). Validity in such approaches depends in part on researchers' awareness and articulation of the assumptions they bring to the process, while at the same time holding themselves open to new experiences and knowledge. (ibid., 1994: 327)

Concepts and Theories In EFF

THE CONSTRUCTION OF EFF REFLECTS CUTTING edge theory on learning and teaching. In five years of continuing work it has involved thousands of people across the U.S. The resulting framework has been shaped by the input of many diverse stakeholders and program-level development and testing.

Certain key theories and theorists played a crucial role in the analysis and understanding of input from the field and in the interpretation of the task to be accomplished. There has been constant interaction between practice and theory and between data and analysis. Four conceptual threads have shaped the EFF framework in important ways:

- a purposeful, constructivist approach to learning;
- rooting education in the context of people's lives;
- an emphasis on application, not just possession, of skills;
- a view of adult development as transformative rather than additive.

Purposeful View of Learning

EFF began by listening to adult learners and identifying four purposes for learning that underpin the kinds of immediate goals learners state when they enroll in education. These purposes are consistent with recent cognitive and socio-cultural research on learning, which characterize it as a process of making meaning—of organizing and interpreting experience. Mezirow, for example, describes learning as "the process of making a new or revised interpretation of the meaning of an experience, which guides subsequent understanding, appreciation, and action." (Mezirow, 1990:1) He argues that these processes are powerfully influenced by our "habits of expectation"—a set of assumptions that constitute a frame of reference. New experiences are assimilated and transformed by these assumptions, which are derived from our past experiences (similar to Kegan's "orders of consciousness," described below).

This means that learning is essentially a social process, the ongoing process through which we make sense of our experiences. Because our lives are social, so are our experiences and the processes by which we come to understand them. (Lave and Wenger, 1991, Wenger, 1996) "Assuming that learning is fundamentally social is not denying that it involves neurological processes, but it is placing these processes in the social context in which we experience them as meaningful. Learning is fundamentally social because we are social beings." (Wenger, 1996: 22) This does not mean that all learning has to happen in a group, but that our social context shapes how we perceive, what is important to us, and how we learn.

These concepts of learning link with research on the social construction of knowledge (see, for example, Scribner, 1988; Lave and Wenger, 1991). These are accounts of the mind in action, in which cognitive tasks are seen not as separate from daily life but as part of its activities. "We undertake cognitive tasks not merely as ends in themselves but as means for achieving larger objectives and goals, and

The EFF framework has focused not on bodies of knowledge to be mastered but on purposeful activity—"work together," "work within the big picture," "strengthen the family system."

we carry out those tasks in constant interaction with social and material resources and constraints." (Scribner, 1988:1) Mental processes are integrated with behavior: "People strive to satisfy purposes that have meaning within their community, and, in their activities, they use tools, symbols, and modes of action that are culturally developed and transmitted." (ibid.: 2).

EFF has drawn on these conceptions to interpret learning as not simply the acquisition of skills and knowledge but the process of assigning meaning to experience and fulfilling purposes that are important to us. EFF's conceptual framework was distilled from ideas that have meaning for individuals consulted during the project—how active citizens, effective workers, and involved parents perform their roles in their particular social contexts. As a result, the EFF framework has focused not on bodies of knowledge to be mastered but on purposeful activity—"work together," "work within the big picture," "strengthen the family system." In an internal document for EFF, Tom Sticht focuses on the importance of "the purposeful, dynamic view of the person" in the conceptualization of EFF standards. He identifies as central to adult learning "the purposeful, constructive nature of the mental process in setting a goal, searching out the input information, processing it by mixing it with prior knowledge, performing an output, and monitoring the latter as feedback for future activity." (CONSABE, 1996: 20) A "constructivist" approach to education focuses on enhancing the individual's capacity to make meaning and achieve purposes by selecting, regulating, making decisions, and acting upon new data.

Rooting Education in the Context of Lives

Adult education has long tried to relate education to life experience. "Competency-based" approaches to adult basic education, dating back to the Adult Performance Level (APL) project in the 1970s, focus on developing the skills required for the real tasks of everyday life, rather than mastering a body of knowledge. However, all the earlier competency-based projects have run into problems of creating long lists of competencies, with no a priori rationale of how to select from them.

During the EFF planning phase, Tom Sticht reviewed efforts to develop competency-based adult education from the mid-1970s and identified a number of concerns. In particular he noted:

- **The "proliferation" issue:** the tendency for projects to develop very long lists of competencies, with no rationale for how many or which subareas should be generated.
- **The "overlap" issue:** the question of the interactions and similarities among the many "competencies"—what underlies the lists of all the things adults should be able to do?
- **The "levels" issue:** in which projects assume that people can be assigned to levels of competency, without any clarity on what the levels mean.
- **The "development" issue:** in which growth is assumed to take place, without any clarity on how adults come to possess knowledge and skills.
- **The "who decides" issue:** the danger of compiling competencies based on constituencies other than adult learners themselves, in contradiction to principles of learner-centered education. [Source: CONSABE, 1996: 22]

The "who decides" issue was the easiest to respond to: adult learners have been consulted throughout the EFF process, along with other constituencies. The issues of proliferation and the question of which concepts are underlying, or generative, concerned the EFF teams throughout the development of standards. They were well aware that many of the K-12 standards, in trying to codify bodies of

As EFF developed role maps in an attempt to identify what adults need to know and be able to do in their important adult roles, it became clear that application or use, not possession of skills, was what mattered.

knowledge, had been unable to avoid long lists, some very long. The history standards, for example, have 39 main standards, 108 subheads and 526 sub-subheads. (Gagnon, 1995: 74)

The problems of proliferation and overlap demand a good theory. Simply collecting data about what adults know and do could be endless. Only theory about learning and knowing can provide the conceptual frame that allows the central or generative items to be identified. As Glaser and Strauss say, the work of theory in social science is (among other things): "to be usable in practical applications—prediction and explanation should be able to give the practitioner understanding and some control of situations." (Glaser and Strauss, 1967: 3) In other words, there's nothing as practical as a good theory. The socio-contextual theory focuses on the skills that help people select, regulate, and act upon new information to accomplish their particular purposes (which in turn are socially influenced).

Similarly, theory about development would help resolve the levels and development issues by providing an understanding of how adults grow and develop competence. Only if levels are not arbitrary but signify real, transformative moments in development (like Kegan's orders of consciousness discussed later) are they likely to be useful to practice.

These issues, and the insights from theory, brought EFF to a different understanding of what "context" should mean. In common Adult Basic Education (ABE) parlance, context means domain, the situation in which learners find themselves—at work or in their family or community. When Sticht initially proposed the "functional context" approach to adult education, however, his intention was to focus on use, not just situation. As EFF developed role maps in an attempt to identify what adults need to know and be able to do in their important adult roles, it became clear that application or use, not possession of skills, was what mattered. Context came to be seen as the reasons people have for learning, the use they want to make of it. In this way, a context-based approach became linked with a purposeful approach to learning.

Application, Not Possession, of Skills

As EFF worked to identify what adults need to know and be able to do as a basis for standards development, it became clear that the application of skills and knowledge, not their simple possession, is most important for adult education. The work on the citizen role articulated this most clearly: in the learners' consultation, people talked about citizenship in terms of action—not simply voting but also taking part in community life. In the focus groups conducted during the planning year, participants talked about citizenship as "taking action" to make a difference, about using skills and knowledge for the common good. They echoed the third purpose for learning—literacy as a vehicle for independent action.

So midway through the planning year, EFF made a crucial shift—from a focus on knowing to a focus on doing. This shift made EFF distinct from K-12 standards efforts, which deal with mastery of skills and bodies of knowledge, and more like the occupational skill standards, which focus on application of skills in the workplace. There are theoretical, not just practical, implications here—a focus on application rather than possession of skills and knowledge is associated with an approach to learning as active, not passive, as constructivist rather than accumulative, as socio-contextual rather than autonomous. Learning then becomes a process not of acquiring facts and skills but of enhancing one's ability to understand one's situation, make decisions about and act upon knowledge, aimed at transforming how one views the world and acts in it.

EFF's challenge is to create standards that combine the purposeful elements of the human condition with transformative adult development.

Adult Development as Transformation

Adult educators have traditionally approached adult development as the growth of self-direction. They assume that, as individuals develop and mature, they become less dependent and more self-directing (Knowles, 1980: 44). Newer research on development conceives it as essentially a learning process. Robert Kegan's work on psychological growth (Kegan, 1982 and 1994) portrays development as mastering successively more complex principles for organizing experience—different "orders of consciousness." These orders are "not merely principles for how one thinks but for how one constructs experience more generally, including one's thinking, feeling and social relating." (Kegan, 1994: 32).

Kegan's orders of consciousness succeed and transform each other from childhood through adulthood: each is more complex, and encompasses the prior principles. For Kegan, development does not depend so much on learning specific skills and knowledge as on transforming ways of knowing—on principles for organizing and interpreting experience. EFF has drawn on these ideas about adult development especially in conceptualizing performance. A developmental approach to performance means it is seen not simply as mastering more and more knowledge and skills in a cumulative way, but as making conceptual leaps in understanding and viewing the world—as transformative more than additive. This approach to development and performance is more consistent with the purposeful view of learning. It challenges most approaches to accountability systems, which are based on policy-defined outcomes and standardized tests. As Sticht wrote,

> *"There appears to be a need for a developmental, theory-based means of assessing competence in adult literacy education that bridges between the "bottom-up" growth-oriented, developmental perspective from which teachers work, and the "top-down" outcomes-based, statistical difficulty approach from which standardized, normed test developers work."* (CONSABE, 1996: 15)

EFF's challenge is to create standards that combine the purposeful elements of the human condition with transformative adult development. The goal is for the small steps of learning to be clearly linked to ultimate outcomes, and for those outcomes to be centered on activity that has meaning in people's lives.

These four conceptual threads intertwine. EFF has been an iterative process of openness to new data and looking for theories that best explain the data and provide a coherent framework on which to build. As EFF developed, it confronted first one, then another issue, and reached resolution. The framework represents a relatively coherent conceptual picture, which is still evolving.

The next three sections of this report describe the processes used and the sources of data collected to create the framework. The assumptions guiding the research are examined, and the credibility and significance of the findings discussed in terms of both theory and practice. Each of the main EFF research activities is described:

- Section 4: Consulting with Adult Learners, which led to the four purposes for learning (laying the foundation for the framework).
- Section 5: Mapping the Roles of Citizen, Worker, and Family Member (beginning the second stage, developing content standards).
- Section 6: Identifying Key Skills and Knowledge of Effective Role Performance (continuing the second stage).

The Foundation: Purposes for Learning

THE 1994 CONSULTATION WITH LEARNERS ABOUT what Goal 6 of the National Education Goals means to them has been the foundation for all subsequent EFF work. It reflects EFF's consistent emphasis on the input of stakeholders—in this case adult learners, who are often left out of consultation. The general approach used here—consultation, analysis of input, broad feedback from stakeholders on the analysis—has been replicated in subsequent phases of EFF research.

The consultation with learners was the first step toward measurement of progress on Goal 6. As the report on this phase says, "we understood that without a consensus on what skills and knowledge adults actually need to be able to participate fully and successfully in civic and economic life we could not determine how far we are from Goal 6 or gauge our progress toward achieving it." (Stein, 1995: 7)

Process for Learner Consultation

The consultation with learners was part of a joint initiative between NIFL and the National Education Goals Panel. After discussions with representatives of the National Adult Student Congress and the National Coalition for Literacy, the two organizations decided to seek student input via their teachers and tutors. Adult literacy practitioners were invited to devote class time to a discussion of Goal 6 as a prelude to students' writing about what the Goal means to them. Literacy South, a training and technical assistance organization with experience in student writing and publishing, developed a set of guidelines for teachers and tutors to use to stimulate discussion (Stein, 1995). Key elements were a set of stem sentences to be completed by students:

- *In my community, competing in the global economy means...*
- *To me, having the skills and knowledge to compete in the global economy means...*
- *To me, exercising the rights and responsibilities of citizenship means...*
- *To exercise the rights and responsibilities of citizenship you have to be able to...*

Following discussions, learners were asked to respond in their own words and submit their writing to NIFL. The invitation to participate was issued in January 1994 in an open letter to adult learners, their teachers, tutors, and program directors. Member organizations of the National Coalition for Literacy actively participated in getting materials to their constituents.[2] About 6,000 invitation packets were distributed by NIFL and Coalition for Literacy members. The goal was to get a broad response from across the country, from different regions and types of programs.

By the end of March 1994, NIFL had received more than 1,500 responses from students in 151 adult literacy programs in 34 states and Puerto Rico. These represent a substantial data source: the average learner response was two paragraphs, some were much longer, and the data set fills a 3-foot file drawer. No attempt was made to draw a representative national sample either of programs or of learners: the responses were self-selected. The overall response rate is impossible to calculate given the dispersed method of recruitment.[3] However, the geographical

The eight-member analysis team spent several days reading and discussing a broad cross-section of learner responses in order to identify themes that appeared robust enough to be used as categories for coding.

distribution and breadth of programs and learners represented is wide. It includes the full spectrum of types of literacy programs: English as a Second Language (ESL), literacy, adult secondary education, and adult high school programs; family literacy, workplace, and prison programs; programs based in community organizations, volunteer groups, community colleges, vocational and public schools. The responses came from metropolitan, urban, suburban, and rural areas, and from a wide range of ages and ethnic groups.

NIFL did not intend a quantitative analysis of responses—counting how many learners had said what, and deducing conclusions about the characteristics of the entire learner population. If it had, there would have been grounds for concern about the representativeness of the sample. In qualitative research, however, analysis is essentially theorizing—discovering patterns and relationships among the data, and testing these against each other and against expectations from prior research and theory (Goetz and LeCompte, 1984; Guba and Lincoln, 1982). Conceptual accuracy is the goal. EFF followed rigorous analytical procedures and credibility checks throughout.

Analysis of Learner Responses

Analysis of the learner responses followed typical procedures for qualitative research (e.g. Goetz & LeCompte, 1984). As the texts from adult learners came in, each was assigned a unique code with region, program, and learner identifiers. The first step in the analysis was to develop a coding frame. Sometimes qualitative researchers design a coding frame in advance of looking at the data, based on theory. More often, as here, the coding frame emerges from the data itself. The eight-member analysis team[4] spent several days reading and discussing a broad cross-section of learner responses in order to identify themes that appeared robust enough to be used as categories for coding.[5] The result was four main categories, each with sub-categories *(see Figure 1)*.

A smaller team then coded all learner respons-

Figure 1 **CODING CATEGORIES**

CATEGORY	SUB-CATEGORY
Personal Development	Daily life/tasks
	Feel better about self
	Future orientation
	Religious practice
	Understanding the world (external)
	Protection/vulnerability
	Able to communicate
Family/ Parenting	Set a good example for children
	Help to improve family circumstances
	Help children with schooling
	Read to children
	Help children with moral/ intellectual development
Job/Compete in Global Economy	Get a job/better job
	Keep up with change/technology
	Keep jobs in America
	Language and cultural skills
	Economic awareness
Roles and Responsibilities of Citizenship	Job-related literacy tasks
	Roles and Responsibilities of Citizenship
	Be an informed citizen
	Participate in political process
	Understand and strive for rights
	Understand and fulfill responsibilities
	Gain citizenship
	Contribute to community

In the synthesis a different set emerged that crosscut and linked with the original codes, but created a new way of looking at purposes of learning.

es and entered them on Ethnograph (computer software designed for analysis of qualitative data).[6] Each coder was assigned two of the four categories, so each category was coded by two people, a step included to increase reliability. After the first week of coding, the team tested the consistency of interpretation of the definitions. Team members met weekly to discuss issues, resolve differences and problems, and reach agreement on how to handle data consistently. They made every attempt to ensure consistency between coders and agreement on the interpretation of the data.

Following the initial coding, the team began synthesizing the data. The coders prepared ten-page working papers that summarized and illustrated findings, sub-category by sub-category, for each of the two primary categories they had coded. This provided two different coders' interpretations for each category, again increasing reliability. Finally, the entire analysis team met to discuss all eight summary reports, compare findings across categories, and draw conclusions.

Four Purposes for Learning

The synthesis step that followed was a crucial one for Equipped for the Future. The original coding categories were reassuringly familiar to adult literacy practitioners: they are the kinds of reasons adult learners often give for enrolling in programs.[7] As with all such lists of individual learning goals, they could have been elaborated further into ever more specific and particular categories. Instead, a different set emerged that crosscut and linked with the original codes, but created a new way of looking at purposes of learning. The EFF synthesis relates to learners' specific goals reflected in the original coding guide, but goes beyond individual and particular learner goals to identify four underlying purposes for adult learning *(Figure 2)*.

Figure 2 FOUR PURPOSES FOR LEARNING

In order to compete in the global economy and exercise the rights and responsibilities of citizenship, adults need the skills and knowledge:

- **To have access to information and orient themselves in the world;**
- **To give voice to their ideas and opinions and to have the confidence that their voice will be heard and taken into account;**
- **To solve problems and make decisions on their own, acting independently as a parent, citizen and worker, for the good of their families, their communities, and their nation;**
- **To be able to keep on learning in order to keep up with a rapidly changing world.**

[Source: Stein, 1995: 4]

These were conceived as "fundamental purposes that express the social and cultural meaning or significance" of the more specific individual goals (Stein, 1995: 9). They are the ultimate goals of people "engaged in defining themselves as competent actors in the world" (ibid.), and they drive learning across the different contexts of adult life. As such, they are consistent with the theories of learning and adult development described in Section 3, with their emphasis on social context, meaning, and action.

Learning for access and orientation includes not only physical or geographic orientation—reading maps and signs—but also psychological or social orientation—knowing what is going on in the world, understanding institutions that have an impact on one's life, getting needed information. This purpose underlies many of the specific goals in the coding frame across all four coding categories—for example, understanding the world, helping children with schooling, getting a job, gaining economic awareness, and being an informed citizen.

The purposes are essentially about lifelong learning for everyone, not just literacy students. They underpin a person's particular reasons for learning at any point of time.

Learning for voice embraces all aspects of communication—written and oral—needed to present oneself to the world. It goes beyond communication skills to the reasons for communicating: to speak and be heard. The writings about citizenship offered an important arena for voice, but it was also important to adults in other aspects of their lives—to communicate with their children's teachers, to exchange ideas at work, to speak up in their community.

Learning for independent action includes the dual elements of independence and action. Many adults who feel their literacy skills are limited depend on others for help with reading and writing. In writings that pointed to this purpose, learners expressed their desire to be able to act for themselves, to make informed decisions, and not have to rely on others to tell them what to do. Independence emerged most strongly in the personal development categories, but learners' responses stressed independent action in all aspects of life—supporting their families, achieving economic self-sufficiency, and fulfilling their responsibilities in their communities.

Learning as a bridge to the future reflected learners' sense that the world is changing. A prime purpose for learning is to be ready for the changes, to learn how to learn, and to prepare oneself for lifelong learning. Particularly at work, keeping up with change is a necessity, but in personal and family development and citizenship, learners saw themselves in rapid social transformation. Keeping a job, adjusting to technological change, and improving family circumstances were all reasons to continue learning.

The purposes are essentially about lifelong learning for everyone, not just literacy students. They underpin a person's particular reasons for learning at any point of time. They are simple, powerful ideas. We might wonder why we are only now identifying them. In part, the answer lies in the sheer volume of the data, which allowed underlying purposes to emerge from the particulars: usually learner goals are treated individually, not in aggregate form. In part, it may lie in the context of asking the question. When we ask one learner at a time in the context of an education program, they give concrete and particular goals—to read better, to help their children in school, to get their GED. When we ask learners in the context of their roles what they need to be most effective as a parent, worker, or family member, they give different kinds of answers.

Feedback and Validation of the Purposes

NIFL published a report on the learner consultation in July 1995, and invited responses and comments (Stein, 1995). Since then, the purposes for learning have been widely presented to stakeholders in conferences and workshops. About 20,000 copies of the published report have been distributed, and a steady demand for it continues. It is also on NIFL's website. The purposes for learning were further explored and validated in the next EFF phase, during 1995-96, by eight planning projects that held focus groups and discussions with a wide range of learners, practitioners, and stakeholders. The credibility of the purposes for learning was enhanced by their subsequent presentation to learners and other stakeholders. The purposes have proved remarkably resilient and resonant.

The work of the planning projects is described in more detail in Section 5. They approached the task of testing and validating the four purposes in various ways. Some projects asked focus group participants to comment directly on the purposes. Others analyzed the data from focus groups within the frame of the four purposes. Some tested the purposes against their focus group data to see if they were congruent. Whatever the approach taken, the

EFF's four purposes for learning provide a link, a bridge, between accountability systems and learners. The purposes for learning are a foundation on which the rest of the framework has been constructed.

planning projects found that the four purposes were consistent with their new data.

The Importance of the Purposes for Learning

Accountability systems require a concept of performance—desired results—in order to measure progress toward them. When framed too close to the individual learner, learner goals are too particular to connect with system accountability, which is framed at societal level. Conversely, the kinds of high-level goals that accountability systems often construct—get the GED, enter vocational training, get a job—do not necessarily reflect the goals of all learners. There may be a mismatch between individual and system definitions of performance. Only if broad, system-level goals are customer-driven will accountability systems work effectively, and produce a real difference in learners' lives. EFF's four purposes for learning provide a link, a bridge, between accountability systems and learners. The purposes for learning are a foundation on which the rest of the framework has been constructed.

The four purposes for lifelong learning were the first step, but on their own they are not enough to change the adult basic education system. They describe why people learn, the purposeful side of learning, but not what needs to be learned. EFF needed to take the next step to describing the "what" by identifying the broad literacy skills needed to be effective in the primary adult roles. The next stages of EFF built on the purposes for learning by creating "role maps" for the adult roles of worker, citizen/community member, and parent/family member through research and validation with the field and other stakeholders.

Role Maps for Effective Citizens, Workers, Parents

Most standards projects start by mapping the terrain and developing a careful review of practice in their area, including (for skills standards) consultation with "subject matter experts." In 1995, following the learner consultation report, Equipped for the Future set out to map the terrain of "what adults need to know and be able to do to fulfill their roles as parents, citizens, and workers" (NIFL, 1995c: 35950). These three are not the only adult roles, but are key ones for public policy.[8] In the first stage of the task, eight planning projects carried out a series of focus groups with stakeholders designed to describe what adults in each role know and are able to do. In successive phases the focus group results were synthesized into draft role maps, presented for extensive feedback from a wide range of role practitioners, revised, and published. Rather than starting with what children learn in school, and conceiving adult education as an attempt to remediate past gaps in knowledge and skill, role maps start from adult life.

In the course of this work, the important shift was made from a focus simply on skills and knowledge to one on action, application, and use of skills and knowledge (noted above in Section 3). The emphasis on what adults do, on broad areas of responsibility and key activities, emerged most strongly in the course of the focus groups convened by the Civic Participation Project (CPP) in New England and southern Appalachia. By April 1996 it was becoming clear that these focus groups were talking about citizenship in different ways from the conventional "civic education" approaches. Grassroots community activists and adult learners in particular were talking about citizenship as "taking action" to make a difference. These actions were not just the usual ones of voting and participating in the democratic process, but also much smaller, local steps—helping a neighbor, taking part in community clean-up, volunteering in schools. Citizenship at its core was not simply a matter of having skills and knowledge, but about using them for the common good.

This perspective was consistent with constructivist theory, in which the central aspect of human activity is seen as that of shaping (constructing) experience. The responses reinforced and strengthened that perspective. The role maps did not simply list everything adults do in daily life (the result of so many competency-based initiatives). People were asked to identify the most important—the central, defining activities in terms of meaning and value—so that a concept could be built of the critical role functions that cross geographical, race, class, and gender divides. This is what has given the role maps their resilience.

As with the four purposes for learning, the process of creating role maps was a naturalistic inquiry that involved collecting new data, analyzing and synthesizing it, and re-presenting it to stakeholders for refinement and validation. Each stage will be described in the rest of Section 5: collection of new data from which initial draft role maps were

People were asked to identify the most important—the central, defining activities in terms of meaning and value—so that a concept could be built of the critical role functions that cross geographical, race, class, and gender divides. This is what has given the role maps their resilience.

constructed, their refinement and validation through structured feedback and inquiry processes, revision of the role maps, and initial drafting of "role indicators," which provide a basis for developing performance measures.

Raw Materials for the Role Maps

The overall charges to the eight planning projects funded by NIFL in 1995-96 were: to explore and test the four purposes; examine what adults need to know and do as workers, citizens, and parents; and begin to engage a wider array of stakeholders in the conversation about developing content standards for the field. The focus groups conducted by each project provided the data from which the draft role maps were constructed.

The eight projects worked in a total of 18 states *(see Figure 3)*. Five projects worked in only one state, the other three in multiple states. Some projects addressed all three roles, some only one role. While there were differences in how each of the projects interpreted its task and carried out its work, there was a common structure. All eight projects convened Working Groups that brought together various stakeholders—adult education and employment training, business and community organizations. All convened focus groups to examine key questions about what adults need to know and be able to do to fulfill their roles. One project also convened inquiry projects, each with an ABE or ESL teacher and students.

A total of 1,1[illegible] participants were involved in 114 focus groups. While the largest single group of participants was adult learners, the focus groups also involved adult education practitioners and a wide variety of others with a stake in adult education—civic and community activists, elected and government officials, employers and employees, clergy, media representatives, social services workers, and teachers in a variety of program settings. Demographic data are not available on all focus groups, but in the 74 groups for which data were

Figure 3. **1995-96 PLANNING PROJECTS**

PROJECT	SITES	ROLE		
		Worker	Parent	Citizen
Adult Numeracy Practitioners' Network (numeracy aspects only)	7 states: IL, VA, OR, OH, NH, VT, RI	✔	✔	✔
CONSABE (Content Standards for Adult Basic Education)	San Diego, CA	✔	✔	✔
Maine Statewide Standards Development	Maine	✔	✔	✔
Minneapolis Public Schools	Minneapolis, MN	✔	✔	✔
National Center for Family Literacy	5 states: AZ, WI, LA, KY, TN		✔	
North Carolina Literacy Resource Center	North Carolina	✔		
Philadelphia Mayor's Commission on Literacy	Philadelphia, PA			✔
Southern Appalachian and New England Civic Participation Project	8 states: KY, VA, TN, VT, MA, RI, NH, ME			✔

A "picture" of the three key adult roles emerged from the syntheses, including broad areas of responsibility, key activities, the skills and knowledge needed to accomplish the activities, and the interrelationship between them, moving toward a common conceptual frame for each role.

reported, the majority of participants was female (sometimes a significant majority, as in the parent/family role groups), and the age range was from teens to 60s, with a majority usually in the 20s and 30s. The ethnic/racial mix varied considerably, from majority white in southern states and Maine to majority African American and Asian in Minneapolis. Most of the adult learner focus groups were more racially diverse than the stakeholder groups *(see Appendix A)*.

Developing Draft Role Maps

Each planning group presented an end-of-year report on its findings. Each project had set out on a somewhat different path, convening different kinds of groups and asking different questions, but each reported their data in a common format, defined by NIFL as follows: "Our goal is to define as fully, as concretely, as specifically as possible, what any/every adult needs to know and be able to do to fulfill their responsibilities in the three key roles related to Goal 6: parent/family member, citizen, worker." (Stein, internal document, April 18, 1996) For each role, there were four research questions:

1. What have we learned about what adults consider to be the broad areas of responsibility for their roles?
2. For each broad area of responsibility, what key activities are important/even necessary parts of being effective in that role?
3. What have we learned about what adults need to know and be able to do in order to carry out those responsibilities?
4. How does the research help us better understand the four purposes for learning? How should they be defined and refined? [summarized from Stein, internal document, April 18, 1996)

Each project reported on its data using this structure for each role. The eight separate reports were then synthesized across roles.[9] The syntheses drew on all the data for that role, looking for common patterns reported by the projects. Although different "conceptual maps" were developed by the projects on the basis of their own data sets, there were many commonalities in reported data. A "picture" of the three key adult roles emerged from the syntheses, including broad areas of responsibility, key activities, the skills and knowledge needed to accomplish the activities, and the interrelationship between them, moving toward a common conceptual frame for each role.

The language chosen for the syntheses came from the data and reflected the purposeful and active depiction of the roles—"taking action," for example. The data were consistent with seeing learners as purposeful as well as cognitive beings—as Kegan puts it, "organizers of their experience." It was hoped the framework would be less a "foundation" (something static and unchanging) and more a "core" (a dynamic source of energy and fusion). In keeping with the guidelines the grantees had developed, the language also needed to be clear, simple, and understandable to learners, practitioners, and the general public.

The synthesis for each role was completed in fall 1996, and the initial draft role maps were published in February 1997. (see Stein, 1997) These draft role maps were not fully elaborated and did not include skills and knowledge. Each defined the "key purpose" that illustrates the central aim of the role, "broad areas of responsibility" that are the critical functions an adult performs to achieve the role's key purpose, and "key activities" through which the role is performed. In keeping with the naturalistic approach to inquiry, the credibility of the draft role maps was not assumed but tested through several iterations of consultation with stakeholders and other informants.

In keeping with the naturalistic approach to inquiry, the credibility of the draft role maps was not assumed but tested through several iterations of consultation with stakeholders and other informants.

Structured Feedback to Revise and Validate the Role Maps

Three consortia were funded by NIFL in fall 1996 to take responsibility for the next phase of work: the refinement and validation of the role maps as a step toward developing content standards for adult education. Although each role was approached separately, the consortia used a common process for structured feedback across all roles. Each consortium convened a national advisory group representing stakeholders, and the worker role consortium also convened state working groups in five states. The consortia were as follows:

- **Citizen Role:** Led by Center for Literacy Studies, The University of Tennessee, Knoxville, in partnership with Mayor's Commission on Literacy, Philadelphia, and New England Literacy Resource Center.
- **Parent/Family Member Role:** Led by National Center for Family Literacy, in partnership with Arizona Department of Education, Virginia Department of Education, Houston Community College System, and Wisconsin Department of Public Instruction.
- **Worker Role:** Led by The Center for Adult Literacy and Learning, University of Maine, in partnership with North Carolina Literacy Resource Center, Ohio Literacy Resource Center, Vermont Adult Learning, Virginia Department of Education, and Adult Numeracy Network.

These consortia carried out an extensive feedback process on the draft role maps over some five months, from January through May, 1997. Each consortium recruited effective role performers and a variety of stakeholders to comment on and revise its draft role map. The worker role process involved industries and unions in five states, the citizen role included people active in a wide range of civic organizations in 13 states, and the family role recruited parents and family members through a variety of groups in 9 states. A total of 864 participants from 18 states took part. Participants were geographically spread out, and diverse in terms of demographics, background, and experiences *(see Appendix B)*.

Performance Consulting Inc. (PCI), a technical assistance team experienced in work with occupational skills standards, SCANS and O*NET, trained facilitators for the feedback sessions to use common process guidelines across all three roles:

- In each session, participants were first introduced to the EFF project and provided information about the work to date, including the purposes for learning and the other draft role maps.
- They were then invited to comment in detail and suggest revisions to the draft role map, based on their own experience and knowledge. Small groups worked on particular parts of the role map and reported back to the whole group with any revisions they proposed. These were then discussed by the group as a whole.
- At the end of each session facilitators attempted to have the group reach a consensus on revisions to the role map. If there was disagreement and consensus could not be reached, the issue was presented to the next feedback session for its consideration.

The credibility of the process of developing and refining the role maps is affected by the recruitment of participants for feedback sessions. Two aspects in particular are important: the identification of "high performers" and the diversity of participants.

High Performers: The identification of "high performers" reveals EFF's links with the occupational skills standards, which commonly spoke of high performance workers. This proved challenging for the consortia to put into practice. High performers in a particular role were defined as people who:

For all three roles, deliberate efforts were made to recruit from as broad a range as possible, within the constraints of time and resources.

5. display commitment to quality in role performance;
6. actively participate in the role and demonstrate a higher than average level of achievement in the role;
7. show initiative in role performance and have earned the respect of others through their role performance.

The concept was least problematic for the worker role. Each of the five participating states convened an interagency working group that was asked to define criteria for high performance workers, to ensure that the criteria were appropriate for the particular industry targeted. The working groups wanted to broaden the concept of "high performance" beyond the emphasis on productivity, which it commonly denotes, to include interpersonal and leadership qualities. For example, one working group came up with the following suggestions to guide recruitment:

"Ask front-line workers, management, and customers the following:

- *Who do you go to for help?*
- *Who do you feel comfortable with when you work?*
- *Who meets or exceeds the workplace technical standards?*
- *Who gets good customer comment cards?*
- *Who excels at performance reviews?*
- *Who has moved up in the company, or has the potential to move up?"* (High Performance Worker Criteria, February, 1997)

For the other two roles, there was no precedent for identifying "high performers," and the concept itself was less clear—what would a "high performing citizen" be, or a "high performing parent?" The concept itself seems less appropriate for these roles, where there is such a broad spectrum of possible ways to perform, with enormous cultural, class, ethnic, and geographic differences. The research process demanded that differences be acknowledged while gaining input that was in some way indicative of effective role performance.

The citizen role consortium focused its recruitment on the concept of "active in the community," with as wide a range as possible of contexts and levels. It identified participants through the national civic organizations represented on the national Working Group, state networks developed in the earlier EFF phases, and adult education networks.

The parent role consortium used the term "effective parents," which was defined in different ways by different people. Conveners of feedback sessions were asked to consult with community leaders to recruit people who from their own experience could contribute to discussions about effective parents. Some participants were identified by school principals and counselors, ministers, community service workers, and college teachers. Others were participants in parenting and family literacy classes. Some were self-selected. The consistent criterion for "effective parents" was that someone (themselves or others) had defined them as such.

Diversity of participation: The other recruitment issue concerns whether participants brought to the discussion a wide range of social and cultural contexts, perspectives and knowledge bases. For all three roles, deliberate efforts were made to recruit from as broad a range as possible, within the constraints of time and resources.

For the worker role, the complexity and range of work contexts made the task of validating the role map particularly challenging. Staff recognized they could not feasibly convene structured feedback from all industrial sectors and work situations, but instead aimed for diversity—including both manufacturing and service sectors, and large, medium, and small enterprises. The aim was not to replicate

Participants in worker role map feedback sessions included employees at all levels, from janitors to mid-level managers. They worked in a range of sectors and company sizes, from "Mom and Pop" grocery stores to large multi-nationals.

the occupational skills standards work on specific job clusters, but to identify the key underlying characteristics of workers common to many different work contexts.

Five states participated, each targeting a particular industry and led by a partner organization *(see Figure 4)*. Each convened a Working Group with representatives of the targeted industries, adult education, employment training, economic development, and related agencies. These Working Group members played an important role in helping to set up structured feedback sessions and recruit participants.

A total of 371 individuals took part in 28 feedback sessions on the worker role map. Almost all were from business and industry, with a few from education and training organizations and community organizations *(see Figure 5)*. Participants included employees at all levels, from janitors to mid-level managers. They worked in a range of sectors and company sizes, from "Mom and Pop" grocery stores to large multi-nationals.

Figure 4. STATES TAKING PART IN WORKER ROLE MAP FEEDBACK

VIRGINIA
Food Industry – including Nabisco, Interbake Foods, National Fruit Product Co., WLR Foods, AFL-CIO and Bakery, Confectionery, and Tobacco Workers International Union.

NORTH CAROLINA
Metals Manufacturing – including Piedmont Triad Center for Advanced Manufacturing, AMP, Inc., Burckhardt American, Newman Machine Co., National Institute for Working Skills, and AFL-CIO.

OHIO
Heavy Metal Industry – including Ford, Ohio Stamping and Machine, American Federation of State, County and Municipal Employees, Ohio State Building and Construction Trades Council and AFL-CIO.

VERMONT
Health Care Industry – including Lamoille Mental Health, Southern Vermont Home Health, Brattleboro Memorial Hospital, Rutland Regional Medical Center, Copley Health Systems, Fletcher Allen Health Care and AFL-CIO.

MAINE
Retail – Including National Retail Federation, Aroostook Center Mall, Hannaford Bros. Co., American Pulpwood Association and AFL-CIO.

Figure 5. SUMMARY OF WORKER ROLE STRUCTURED FEEDBACK PARTICIPANTS

REGIONS		
Northeast	218	(59%)
Southeast	57	(15%)
Midwest	96	(26%)
TOTAL PARTICIPANTS	371	
ORGANIZATIONAL AFFILIATIONS		
Business/Industry	208	(56%)
Union	46	(12%)
Voluntary/Community/Religious	21	(6%)
Education	117	(32%)
Government	14	(4%)
DEMOGRAPHICS		
Male	101	(27%)
Female	217	(58%)
White	302	(81%)
African American	52	(14%)
Hispanic	2	(<1%)
Other	5	(1%)
Age: 18-25	23	(6%)
26-35	80	(22%)
36-49	184	(50%)
50+	73	(20%)

Participants in the citizen role structured feedback brought experience in a wide range of civic participation activities.

For the citizen role a total of 25 structured feedback sessions were held in 13 states, involving 257 participants *(see Figure 6)*. Of the 242 who completed registration form details, a large majority was female (70%). There was more diversity in terms of race and ethnicity: 59% were white, 18% were Hispanic and 12% African American. Almost all were U.S. citizens, but 37 did not speak English as their first language.

Figure 6. **SUMMARY OF CITIZEN ROLE STRUCTURED FEEDBACK PARTICIPANTS**

REGIONS		
Northeast	88	(36%)
South	115	(47%)
West/Midwest	39	(16%)
COMPLETED REGISTRATION	242	
ORGANIZATIONAL AFFILIATIONS		
Community Groups	75	(33%)
Volunteer Organizations	28	(12%)
State/Local Governments	39	(17%)
Religious Organizations	15	(7%)
Business/Industry	11	(5%)
Labor Unions	3	(1%)
Education/Academic	66	(29%)
Foundations	6	(3%)
Other	39	(17%)
DEMOGRAPHICS		
Male	66	(27%)
Female	170	(70%)
White	143	(59%)
African American	30	(12%)
Hispanic	43	(18%)
Asian/Pacific Islands	6	(2%)
Other	7	(3%)
Age: 18-25	6	(2%)
26-35	25	(10%)
36-49	116	(48%)
50+	77	(32%)

Participants in the citizen role structured feedback were active in many kinds of civic organizations, and brought experience in a wide range of civic participation activities. The largest single grouping was of local community based organizations. Others were active in state and local government (elected and appointed positions), religious organizations, unions and businesses, educational and academic organizations, and a variety of local chapters of national organizations. Given that the target population of people who are "active in their community" is undefined, the representativeness of these participants cannot be judged, but they cover a range of types of involvement in community and civic affairs.

For the parent role, 17 feedback sessions were held in 9 states, involving 236 individuals *(see Figure 7)*. Participants represented all economic levels, from welfare recipients to high-income parents. The parents who worked outside the home had a wide variety of jobs: farmers, teachers, nurses, service workers, managers in small and large businesses, company directors, and a CEO of an international company. Some were retired (including a former state legislator). They had a range of values, from conservative religious to more liberal. Their education ranged from those working to get their GED to a sprinkling of Ph.Ds. They were affiliated with a wide variety of organizations—government, education, libraries, community and voluntary organizations, religious organizations, youth groups, business and industry, and health care. Most (198) of the participants had English as their first language; 38 did not. Two of the sessions were conducted in Spanish. Two groups were conducted on Native American reservations.

In addition to these structured feedback sessions, the parent role map was presented to other

Participants in the parent role feedback sessions represented all economic levels. The parents who worked outside the home had a wide variety of jobs: farmers, teachers, nurses, service workers, managers in small and large businesses, company directors, and a CEO of an international company.

Figure 7 SUMMARY OF PARENT ROLE STRUCTURED FEEDBACK PARTICIPANTS

REGIONS		
East/Southeast	56	(24%)
South	98	(42%)
Midwest	38	(16%)
Southwest	44	(19%)
TOTAL PARTICIPANTS	236	
ORGANIZATIONAL AFFILIATIONS		
Parent Education	22	(9%)
ABE	62	(26%)
Family Literacy	44	(19%)
Parents From the Community	108	(46%)
DEMOGRAPHICS		
Male	26	(11%)
Female	210	(89%)
White	117	(50%)
African American	62	(26%)
Hispanic	35	(15%)
Asian/Pacific Islands	4	(2%)
Other (Native American)	18	(8%)
Age: 18-25	24	(10%)
26-35	73	(31%)
36-49	98	(42%)
50+	41	(17%)

groups for feedback. In February 1997 a national meeting of 200 Even Start coordinators from 32 states gave feedback on an early draft of the role map. In summer 1997, an advanced training session for family literacy practitioners held by the National Center on Family Literacy devoted a session, involving 17 teachers and administrators from 8 states (a majority from Kentucky and Tennessee), to feedback on the role map. Finally, the National Parent-Teacher Association staff and volunteers reviewed and made suggestions for revising the role map.

Recruitment for the feedback sessions across all three roles deliberately sought a broad range of input, and achieved that goal. Midway through the feedback process, a check was made of the demographic composition of the participants, and remaining sessions tried to target any imbalances. The family member role, for example, added a group of non-parents. The participants were not a random sample, nor do they represent the demographics of the entire adult population. But they do represent a very wide range of perspectives on role performance.

The Inquiry Process

In addition to the structured feedback process, the citizen role consortium initiated a series of inquiry projects to test the draft role map in adult education classroom settings. These involved 36 teachers, each with a group of students, in 23 program sites and nine states *(see Figure 8)*. The inquiry sites were both urban and rural, and represented a range of types of program settings—ESL, ABE-1, GED preparation, adult high school, family literacy, and prison programs. They were based in different organizations—a library, a Private Industry Council, several community-based organizations—as well as adult education programs.

Figure 8 INQUIRY PROJECT SUMMARY

REGION	TOTAL	RURAL	URBAN	ABE/ASE	ESOL"
New England	5	2	3	3	3
Southeast	7	5	2	6	1
Pennsylvania	6	0	6	5	1
California	3	0	3	3	1
Texas	2	1	1	2	2
TOTAL	23	9	14	19	8

Each role map went through a number of revisions based on structured feedback and inquiry projects, until project staff felt there was broad consensus.

Each teacher chose to focus instruction on a broad area of responsibility in the citizen role. All kept logs of the work and submitted reports, including samples of student work. The inquiry projects enabled the citizen role consortium not only to gain feedback from adult learners on the draft role map, but also to begin to explore how the role maps might be used in the classroom. Because the projects took place over several months, they allowed more in-depth exploration of the meaning of concepts such as "work together." Teachers investigated how these might be addressed as part of literacy education. They also gathered information about the skills and knowledge associated with the key activities. This information was drawn on in the later stage of identifying skills and knowledge *(see Section 6)*.

Revising the Role Maps

Each role map went through a number of revisions based on the structured feedback and inquiry projects, until project staff felt there was broad consensus. Often at this point, participants in new feedback sessions would agree on the concepts but suggest minor wording changes. Both the worker and citizen role maps were revised twice during the feedback process, based on analysis of the proposed revisions, with the revised map presented to the next feedback sessions. The maps were revised again at the end of the process. Because of contract delays, the parent/family member role consortium started the feedback sessions a month later than the others, and revised the draft role map after each session.

For each role map, the revisions were carried out by a small work group of staff and associates who were experienced in adult basic education and employment training. They reviewed the proposed revisions, consolidated similar suggestions, and made judgments about merging others, using both the proposed revisions and recordings of discussion about them to clarify intent. Where the data clearly identified real differences, the work group listed the unresolved issues and asked the next round of feedback sessions to address the disagreements and suggest resolutions. All such issues were resolved by the end of the feedback process.

The most extensive changes were made in the parent role map, which was redefined as a "family member" role map. This change came from participants in early feedback sessions, who wanted the role map to reflect a broader range of family responsibilities. One session created definitions of "family" and "parenting," which were then taken to subsequent feedback sessions and broadened somewhat—to include other children in one's care, for example *(see Figure 9)*.

Figure 9. **DEFINITIONS OF "FAMILY" AND "PARENTING"**

Family: A group of people who have common values and common bonds, living under the same roof. Loving and caring for one another. All families are different!

For all three roles, there were some changes in the "purpose" statement and in the "broad areas of responsibility," but the main changes on the role maps as a result of the structured feedback were at the level of key activities. *(For an example from the citizen role map, see Figure 10.)*

Such changes were partly about wording, and reflected attempts by the feedback groups to ensure that the wording conveyed their understanding of the meaning more accurately. But in part, the changes reflected refinement and expansion or focusing of the activities themselves. By asking participants to help construct a role map that reflects their experience of what it means to be a citizen, worker, or family member, EFF was addressing

Figure 10. **SAMPLE CHANGES IN CITIZEN ROLE MAP**

INITIAL DRAFT	3/97 REVISION	5/97 REVISION	FINAL
BROAD AREAS OF RESPONSIBILITY			
Forming and expressing opinions and ideas	**Form and express opinions and ideas**	**Form and express opinions and ideas**	**Form and express opinions and ideas**
KEY ACTIVITIES			
Develop a sense of self in relation to the world	Develop a sense of self that reflects your history, values, beliefs, and roles in the larger community.	Develop a sense of self that reflects your history, values, beliefs, and roles in the larger community.	Strengthen and express sense of self that reflects your history, values, beliefs, and roles in the larger community.
Communicate so that others understand	Listen to and learn from others' experience and ideas	Listen to and learn from others' experience and ideas	Learn from others' experience and ideas, e.g., listen, read, watch
	Communicate so that others understand	Communicate so that others understand	Communicate so that others understand
	Reflect on and re-evaluate your opinions and ideas	Reflect on and re-evaluate your opinions and ideas	Reflect on and re-evaluate your opinions and ideas

meaning and values. Citizenship is not just about voting in elections, for example, but about taking action in many ways to make a positive difference in the world. Parents are seen as creating a vision for the family, and promoting values, ethics, and cultural heritage. Workers not only do the work but pursue work activities that bring personal satisfaction and meaning to them. The issue of values and meaning is integral to the role maps; they are not decontextualized lists of skills.

Disagreements about values arose and needed to be resolved. For example, in the family role feedback, one group made the proposal that a key activity should be "take children to church." While some parents felt strongly that this should be included, others did not agree—they said that they do not belong to a church but are spiritual. This issue was taken to other groups, who recommended a strong reference to spirituality but not to church attendance. Participants in the feedback sessions represented diverse social contexts, with often conflicting value systems. However, by keeping the role maps broad and general, EFF attempted to construct a framework on which people with divergent value systems could agree.

As a result of the structured feedback process, there can be some confidence that the broad areas of responsibility and the activities in the role maps represent a credible portrait of the three adult roles, distilled from the experience of a broad sector of the population.

Role Indicators

To move toward standards it is not enough to map broad areas of responsibility and key activities. We also need to know what successful performance of these activities looks like in order to identify the skills and knowledge needed to do them. "Role indicators" describe successful performance of key activities, and so provide an important link between activities and skills. In the later stages of role map revision, during April and May 1997, participants in

In all the roles, facilitators found that it was often hard for people to identify role indicators. Role performance seems grounded in context, and participants found it difficult to think globally about indicators of performance.

the structured feedback sessions were also asked to help identify role indicators. Facilitators introduced role indicators this way:

"Role indicators help us understand the outcomes, procedures, and context of what successful adults do as parents, or workers, or citizens.... Role indicators share several characteristics:

- *They are activity-based—they are something someone does and usually have an observable outcome or process.*
- *They usually require multiple skills and knowledge to do so: they are not a single skill.*
- *They usually have an evaluative quality: they suggest how and/or how well something is done."* [Facilitators' guide, undated]

Working in small groups, participants used their own experience to identify role indicators for specific subsets of key activities. Each small group presented its proposed role indicators to the whole group, where they were further refined *(examples from citizen role in Figure 11)*. In all the roles, facilitators found that it was often hard for people to identify role indicators. Role performance seems grounded in context, and participants found it difficult to think globally about indicators of performance. Most could think of specific examples from their own experience more easily than general descriptions. The evaluative aspect was particularly difficult—describing how well something is done. In one report from a family role session, the facilitator commented that "12-15 people in a group seldom come up with the evaluative component other than to add the word 'consistently' or 'regularly.' Trying to get this from the group has been frustrating." (Internal e-mail, 5/8/97).

Because the role indicator data was collected in the later rounds of feedback sessions, there was no opportunity to test or validate these in subse-

Figure 11 **SAMPLE ROLE INDICATORS: CITIZEN ROLE**

BROAD AREAS OF RESPONSIBILITY			
Become and stay informed	**Form and express opinions and ideas**	**Work Together**	**Take action to strengthen communities**
KEY ACTIVITY			
Identify and monitor problems, community needs, strengths, and resources	Strengthen and express sense of self	Get involved in the community and get others involved	Help self and others.
ROLE INDICATORS			
• Asks the right questions to get relevant information • Contacts people knowledgeable about the problem or need • Routinely monitors a variety of media resources	• Feel comfortable in diverse situations and with diverse groups • Identifies own perspectives, points of view, values, and beliefs • Exhibits self-confidence and personal authority	• Supports the efforts of others • Reaches out to a diversity of people • Volunteers time and effort	• Shares personal resources (time, money, materials) • Assesses personal needs and strengths to determine and/or inform • Stays up-to-date on community resources and needs.

The role maps represent the first step toward developing standards for adult education.

quent sessions. However, issues relating to role indicators suggested in earlier sessions were passed on to facilitators at later ones, in an effort to make the role indicators clear and accurate. Use of the role indicator data in the beginning development of standards is discussed in Section 6.

The role maps represent the first step toward developing standards for adult education. They are not the first attempt to identify skills needed to perform life tasks, since they are similar to earlier competency-based efforts. However, the role maps differ in their focus on purpose, meaning, and value. Coordinators were constantly aware of the hazards of developing long lists of decontextualised competencies. Instead they sought to link tasks in a hierarchy focused on broad areas of responsibility. On their own, the role maps provide only part of the guidance needed by the field. Adult education for the most part teaches skills and knowledge, which now needed to be elaborated and linked with the role maps to show how application and use of skills relate to real life role performance. The work on skills and knowledge was the next phase, overlapping with the final refinement of the role maps.

Identifying Skills and Knowledge

THE ROLE MAPS CONCENTRATED ON BROAD areas of responsibility, key activities, and role indicators as the areas on which the least work had already been done. Skills and knowledge were always a crucial element, and new data had also been gathered on these. In addition, there was a substantial body of published work on skills and knowledge associated with adult roles. In the next phase of work the EFF initiative constructed a database on skills and knowledge from published sources and EFF data, and linked the resulting skills and knowledge data with the refined role maps.

Developing a Database On Skills and Knowledge

In spring 1997, the EFF technical assistance team and coding teams from each of the role consortia reviewed and coded data on skills and knowledge. Each role consortium was asked to review the literature relating to its role and identify up to 10 documents that in its opinion defined the current state of knowledge about skill requirements for effective performance of that role *(see Appendix C)*. To compile the sources, the three role consortia consulted with their national advisory groups, which brought together representatives of key organizations in their field.

These documentary sources were uneven in terms of quality and comprehensiveness. The review exercise revealed the extent to which there is a need for additional research on the skills required for effective role performance, especially for the family and citizen roles. While the worker role had extensive source documents because of the work of SCANS, O*NET, and the occupational skills standards, the citizen and family member roles had far fewer solid documentary sources. In the area of parenting, for example, it became apparent how little of the large literature on preferred or advised behavior is based on solid research on the skills and knowledge needed. In the citizen role, although there were K-12 standards, these reflected a traditional concept of "civic education" that fails to include the broad domain of practical "citizenship" identified in EFF's own research. Both these roles needed to rely heavily on data collected in EFF focus groups, structured feedback, and inquiry projects.

Coding the Skills Data

Each of the source documents in the database had been created independently, and there were few commonalities in language. The PCI technical assistance team developed an initial coding guide that made it possible to bring skills and knowledge from each of the documentary sources into a common framework, which could then be linked with the role maps *(see Figure 12)*. Deliberately based on the Department of Labor's O*NET skills framework, the guide created a sorting mechanism that could clearly link the EFF framework with SCANS and O*NET.

Figure 12. **INITIAL CODING GUIDE FOR SKILLS AND KNOWLEDGE**

Foundation Skills	• Reading • Writing/Drawing • Mathematics • Science • Speaking • Listening • Use of Technology • Learning to Learn	**Interpersonal Skills**	• Guiding and Teaching Others • Influencing and Advocating • Leading • Negotiating • Collaborating • Valuing Diversity
Extended Literacy Skills	• Identifying, Defining, and Processing Information • Resource Management, Planning, and Scheduling • Problem Solving, Decision Making, and Critical Thinking • Creative Thinking • Systems Thinking and Visioning	**Personal Development**	• Characteristics • Attributes • Personal Qualities • Values and Abilities • One's View of Oneself
		Knowledge	• Academic Knowledge • Contextual or Experiential Knowledge

There were some significant differences between this coding guide and the SCANS and O*NET frameworks.

1. The term "foundation skills" was used in place of "basic skills." The aim was to broaden the conception of basic skills—the purview of adult basic education—beyond reading, writing, and math to address all the EFF skill areas.
2. Technology and learning to learn were included in Foundation Skills, in accordance with the literature on occupational skill requirements, which report these as essential to success. These skills also appear in SCANS and O*NET, but in other categories.
3. A new category of "Extended Literacy Skills" was added to designate skills that are regarded as essential but go beyond the scope of most basic education programs. Most of these had been identified as SCANS "competencies."

Each role consortium identified two coders experienced in adult education and familiar with the role maps. The coders for all three role groups were trained together, and inter-coder reliability was tested during the training. The technical assistance team reviewed the coders' work at regular intervals throughout the coding process and provided assistance to resolve coding problems. The coders reviewed each source document and highlighted parts of the text that described skills or knowledge (called "data text items"). They assigned up to three codes to a single text item. When a text item did not fit any of the codes, coders noted issues and problems. Each text item and code(s) was then entered into a standard EXCEL spreadsheet. Thousands of text items were entered, representing the "state of the art" on adult skill requirements.

The initial coding guide enabled the coders to create broad categories of skills. To acknowledge more discrete subskills that reflected the particular demands of the roles, the coders needed to create subcategories within each skill category. The coding frame was revised for each role separately in a series of "linkage meetings," bringing together the role coordinator, coders, technical assistance team, and adult education practitioners with experience in particular skill areas. Text items within a particular subcategory of the coding guide, such as reading, were sorted and re-classified into new "sub-subcate-

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Working together, participants in the three linkage meetings created the links between the key activities of the refined role maps and the skills and knowledge in the revised coding frame.

gories." As a result, the original coding guide was modified differently for each of the three roles: the first and second levels were the same, but the third level (sub-subcategories of skills) was different for each role *(see examples of these in Figure 13)*.

Linking Skills With Role Map Activities

At this point, EFF had two independently derived documents about each role: a role map consisting of responsibilities, activities, and role indicators, created and refined through original research and extensive consultation; and a large database of skills and knowledge, coded mainly from documentary sources along with original data collected by EFF. The next step was to bring these two together in order to achieve the EFF goal of a "clear picture of what adults need to know and do in order to fulfill their roles as citizens, workers and family members," on which standards could be based.

This task was carried out at the same "linkage meetings" described above in Coding the Skills Data. The teams included many of the facilitators of the structured feedback sessions, who were very well informed about role map discussions. The teams were thoroughly familiar with the revised coding frames. Also on the teams were experienced literacy practitioners with expertise in particular skill areas.

Working together, participants in all three linkage meetings created the links between the key activities of the refined role maps and the skills and knowledge in the revised coding frame (at the sub-subcategory level). They were guided in making the

Figure 13. **EXAMPLES OF ROLE-SPECIFIC CODING FRAMES – "FOUNDATION SKILLS: READ"**

CITIZEN ROLE	FAMILY MEMBER ROLE	WORKER ROLE
Apply effective reading strategies	Read to children	Read or interpret charts, graphs or other visual displays
Comprehend what you read	Structure of language	Evaluate reading materials
Read a variety of texts for a variety of purposes	Reading for understanding	Check against written specifications
Use texts to inform opinions and broaden knowledge base	Mastering reading	Identify personally relevant information from written documents
Interpret and infer meaning from text		Interpret and infer meaning from text
		Read to determine actions
		Read material and describe concepts
		Read numbers
		Read and interpret mathematical ideas
		Understand vocabulary
		Read medical and dental forms and related information
		Read instructions
		Read agendas
		Read sentences and paragraphs
		Apply information gained through reading to new situations

The goal is to support adults in their role performance, and for this, both skills and their practical application are necessary.

linkage between activities and skills by data collected earlier in the EFF research. They drew on reports of feedback session discussions about what the role activities meant and entailed, as well as the role indicators created in those sessions *(see page 27)*, which provided a more detailed picture of specific attributes of key activities.

These linkages were a way of grounding the skills in their application in key activities, and ensuring that the key activities are sufficiently elaborated so that education programs can prepare adults to perform their roles successfully. The goal is to support adults in their role performance, and for this, both skills and their practical application are necessary.

The linkage process reveals how complex the relationships are between skills and activities. Most of the activities require several skills. Most of the skills could be applied in a number of activities. The "cross-walk" between the two is not a simplistic equation, but a complex web. It reveals how embedded narrowly-defined "literacy" skills are within broader interpersonal and intrapersonal skills (like communication and social skills, self-knowledge and self-worth) and contextual knowledge. Adults need skills from all the categories to achieve the purposes for learning and to carry out their roles effectively.

By the end of June 1997, the EFF team had accomplished a great deal. They had refined and validated role maps describing broad areas of responsibility and key activities. For each role they had developed a set of skills and knowledge based on the literature. They had created linkages between the role activities and the skills and knowledge needed to carry them out.

As a basis for standards, the separate roles still needed to be linked and brought into one coherent framework. Developing one framework that crosses the three roles is consistent with life experience. There may be three roles, but one individual carries out all three, and that individual does not keep his or her life in separate compartments. Although the roles are distinct in many ways, there are many interconnections and areas of overlap. There is a great deal of evidence of transfer and interconnections between learning in one role and performance in another.

The three roles also needed to be linked from the perspective of the adult education system. One set of standards rather than separate role-based standards would serve the field better. While some programs focus particularly on work-related learning or parenting, most support individual learning across participants' lives. Policymakers and teachers alike need the clarity and simplicity of a single set of standards.

For all these reasons, there was a need to condense and abstract the three role maps into one, without losing the capacity to draw on the finer detail of the individual role maps. In the next phase of work, EFF defined "common activities" across the three roles, and a single set of "generative skills" that are needed across the roles. Initial work on this consolidation was carried out by the entire 30-person EFF team at a week-long meeting at the end of June 1997.

Common Activities

Common activities were defined as those that occur in all three roles. Because the three role maps had been constructed separately, common activities were not necessarily found in the same levels. Sometimes a "broad area of responsibility" in one role was substantially the same as a "key activity" in another. Sometimes a "key activity" in one role occurred as a "role indicator" in another, reflecting a lesser significance to that role. Some of these differences may reflect the process through which they were identi-

Linking activities across the three roles meant that each role influenced the whole in particular ways.

fied, as well as the different histories and personal interpretations of the role teams. But they also reflect real differences in the centrality of activities, their importance or frequency in different roles.

In identifying a core set of common activities across all the roles, all three levels—responsibilities, key activities, and role indicators—needed to be compared for all three roles. The entire EFF team participated in a simple card sort technique to sort all the role map elements into initial sets of common items representing similar activities or functions. Four groups worked separately and compared results. A taskforce took the four proposed sets and consolidated them into one, which the whole group reviewed. The goal was to have a set of common activities whose content did not overlap. That set was later refined by e-mail to the final set of 12 common activities *(see Figure 14)*.

Linking activities across the three roles meant that each role influenced the whole in particular ways. For example, the citizen and family member roles were particularly strong on interpersonal and communication activities such as "Guide and Support Others" and "Respect Others and Value Diversity." The worker role was particularly strong on systems activities like "Work Within the Big Picture"

Figure 14. **COMMON ACTIVITIES**

Gather, Analyze, and Use Information
Find and analyze information from diverse sources. Use it to form opinions, make decisions, and take action.

Manage Resources
Find, manage, share and allocate time, money, and material resources. Use resources in a way that supports your own needs, goals, and priorities and those of the family, organization, or community.

Work Within the Big Picture
Recognize and monitor the social, economic, political, and organizational systems of which you are a part. Work with their structures, rules, expectations, practices, and cultures in setting a course of action.

Work Together
Work with family members, neighbors, or coworkers to get things done.

Provide Leadership
Inspire, influence, direct, and motivate others. Take responsibility for results.

Guide and Support Others
Help others succeed by setting an example, providing training, or giving other kinds of assistance.

Seek Guidance and Support From Others
Seek out the support you need from others.

Develop and Express Sense of Self
Examine, clarify, and express your values, beliefs, culture, and history. Use your understanding of self to guide your actions.

Respect Others and Value Diversity
Respect and appreciate the values, beliefs, cultures, and history of others. Use this appreciation to counteract prejudice and stereotypes.

Exercise Rights and Responsibilities
Act and advocate on behalf of yourself and others based on a knowledge of your rights and responsibilities and those of others.

Create and Pursue a Vision and Goals
Establish a vision and goals. Use your vision and goals to identify, plan, and prioritize tasks and activities.

Keep Pace With Change
Look ahead to challenges and prepare for them by learning new skills, adapting current skills to new challenges, and learning from your own and others' experiences.

(Source: NIFL, 1998)

The consolidation of the role-specific skills coding frames into a common set of "generative skills" was driven by the same need as that for common activities: the need of both policymakers and practitioners for a single set of standards for adult education.

and "Keep Pace With Change." Activities were only designated as "common" if they appeared in all three roles. However, common activities had different emphases and meanings in the context of each role.

Generative Skills

Three separate role-specific skills coding frames had been created, which nevertheless had a great deal of commonality and overlap. The consolidation of these into a common set of "generative skills" was driven by the same need as that for common activities: the need of both policymakers and practitioners for a single set of standards for adult education. At the same week-long meeting, EFF team members sorted and compared the sub-subcategories of each of the three role-specific skill frameworks, and created a first draft of a consolidated list of skills that occur in all three. This was later refined via e-mail correspondence and the work of the technical assistance team. At one point the list grew to over 50 skills, clearly falling into the "proliferation" trap that Sticht had identified a year earlier as problematic for all competency frameworks. The long list needed to be consolidated and reduced to something more manageable. In the end, 17 generative skills in four broad categories were identified *(Figure 15)*.

Generative skills were defined as "integrated skill processes that are durable over time, in the face of changes in technology, work processes, and societal demands." As such they are required in order to carry out the common activities identified from the role maps, and many day-to-day tasks. Using the original role-specific skills coding, which linked skills with key activities, the new skill classification could be directly linked with the newly defined common activities.

While some of the skills appear familiar to adult educators, their definitions reveal them as more clearly linked to purposeful action. "Read with Understanding," for example, is defined as follows:

> *To read with understanding adults need to determine the reading purpose; select reading strategies appropriate to the purpose; monitor comprehension and adjust reading strategies; analyze the information and reflect on its underlying meaning; integrate it with prior knowledge to address reading purpose.*[14]

Figure 15 **GENERATIVE SKILLS**[13]

Communication Skills

These five skills enable adults to communicate ideas, information, and opinions to diverse audiences.

- Read With Understanding
- Convey Ideas in Writing
- Speak So Others Can Understand
- Listen Actively
- Observe Critically

Interpersonal Skills

These five skills enable adults to work with others.

- Cooperate With Others
- Advocate and Influence
- Resolve Conflict and Negotiate
- Guide
- Lead

Decision-Making Skills

These three skills hold the keys to making decisions, solving problems, formulating action plans, and evaluating results.

- Plan
- Solve Problems
- Use Math to Solve Problems and Communicate

Lifelong Learning Skills

These four skills enable adults to keep learning in order to keep up with change.

- Take Responsibility for Learning
- Reflect and Evaluate
- Learn Through Research
- Use Information and Communications Technology

The generative skills are consistent with the theoretical assumptions underlying EFF and with the concepts of the roles derived from participants in focus groups and feedback sessions.

"Solve Problems" is defined as follows:

To solve problems adults need to anticipate or identify problems, use information from diverse sources to arrive at a clearer understanding of the problem and its root causes; generate alternative solutions, evaluate strengths and weaknesses of alternatives; select the alternative that has the best chance of solving the problem; and establish criteria for evaluating the effectiveness of solution.

The generative skills are broad and include other, more specific skills. "Read with Understanding," for example, assumes decoding and pre-reading strategies to comprehend and interpret text. But "Read with Understanding" is more than a simple additive effect of more specific skills: it requires a critical, evaluative stance to reading, a view of reading that is conceptual, not mechanical. So it is with most of the generative skills: they are skills that center on humans as purposeful, meaning-making beings. They are consistent with the theoretical assumptions underlying EFF and with the concepts of the roles derived from participants in focus groups and feedback sessions.

The skills link with the key activities, but there are clearly many ways of getting an activity accomplished. While reading may be regarded as an essential skill for gathering and using information, there are many who successfully use other skills in that activity—talking and listening with others, for example. The skills are like a toolbox, in which we all are quite proficient at some and less proficient at others. Our tools get better as we use them and may atrophy if we don't. We select from our tool box to meet the needs of particular tasks, in particular contexts, at particular times. Learning helps us have more skills from which to select, and be more proficient with our skills.

Knowledge Domains

Knowledge domains had been coded along with skills from the documentary sources in the role-specific databases, with coders for each role elaborating the initial two broad codes for knowledge (academic and practical/experiential). These were then compared and consolidated across the three roles, in the same way as the activities and skills, to create a set of "Knowledge Domains" that cross the three roles. Knowledge domains were defined as "the concepts, procedures, data, information, and perspectives that support the generative skills and are necessary to carry out the common activities in our adult roles."

It was clear from the coding process that knowledge domains are more context-specific than either skills or activities. The particular knowledge needed in a certain workplace is different from that needed in others. The skills and knowledge needed by parents of a certain age child differ from those needed by parents of older or younger children. Yet the whole of our education system is predicated on the presence of a common knowledge base that crosses life circumstances and is needed by the "educated person." The controversies around K-12 standards have concerned just what should be in that knowledge base—the relative importance of the Mogul empire versus the French Revolution, the importance of trigonometry versus statistics, whether literature should include works from outside the English-speaking world. EFF's focus is on adult life and the knowledge needed to accomplish all the adult roles successfully. The knowledge domains are conceptual rather than detailed; the specifics emerge in relation to the activities themselves.

Each piece of the puzzle needed to create standards was now in place. Starting outside education

The knowledge domains are conceptual rather than detailed; the specifics emerge in relation to the activities themselves.

Figure 16 KNOWLEDGE DOMAINS

How We Grow and Develop: includes knowledge about physical and intellectual growth as well as spiritual and psychological development.

How Groups and Teams Work: includes knowledge about the purposes of groups and teams, the stages of their development and dynamics, and the processes that make groups and teams effective.

How Systems Work: includes understanding the nature and structure of formal and informal systems, how power is distributed in systems, the official and unofficial rules operating within a system, and how various systems interact, such as family, schools, health care, and social services.

Rights and Responsibilities: focuses on understanding the fundamental concepts that are central to democratic ways of life, including the provisions of the Constitution of the United States and the rights and responsibilities of citizenship; political and legal processes and rights, consumer rights, landlord and tenant rights and responsibilities; and employment agreements and union contracts.

Culture, Values, and Ethics: includes knowing the meaning of traditions and culture in our lives, the influence of language on culture, how individuals are shaped by family and community values, and the effects of values and ethics on law and government.

How the Past Shapes the World We Live In: includes understanding the historical context of current issues and opportunities, knowing more about what came before, and lessons learned. The historical contexts include family, community, workplace, nation, and world.

and working inward, EFF participants created role maps based on what adults do in their roles as worker, citizen, and parent. They identified the broad areas of responsibility adults hold, and the key, central activities adults pursue. They defined the broad skills and knowledge needed to carry out the activities and fulfill the role expectations. All fit within the frame of the four purposes for learning that adult learners had elaborated in 1994. The complete framework was the "big picture," within which education and training programs could support learning, and which all adults pursued every day in their own contexts.

This research report stops here, with the role maps complete and the standards in the process of being created. The next research report will deal with subsequent phases of work:

- Validation of Skills—expert validation (by role experts) and field validation (by practitioners in field development phase);
- Standards Development and Testing—the field review phase;
- Performance Measurement—development of new tools;
- Staff Development and Technical Assistance to Enable Programs to Implement EFF.

Discussion

EQUIPPED FOR THE FUTURE AS A SYSTEM reform initiative is far from complete, and it is too early for a thorough assessment of the work. But over this five-year period, a great deal has been accomplished to change the frame of reference of the field of adult basic education. In this final discussion section we will review briefly two main areas in which EFF has important implications: its contributions to integrating theory and practice, and its commitment to a participatory process for system reform.

Integrating Theory and Practice

EFF builds on and contributes to the growing body of approaches to learning as a purposeful act—not decontextualized and value-free, but embedded in particular purposes and specific contexts. This is most clearly seen in the complex web linking skills and activities (the application of skills). There are no simple or one-to-one relationships; instead, individuals make choices about how to apply the skills they have. Essentially, like making dresses out of flour sacks, adults select skills according to what is needed in particular applications and what skills are available to them. Learning increases skills' proficiency and enriches understanding, providing adults with greater flexibility in achieving their purposes.

EFF provides evidence for this theoretical stance from the systematic input of learners and stakeholders. At the same time it provides some insights into the practical application of these different concepts of learning in both accountability and teaching systems.

EFF's focus on the application, rather than possession, of skills and knowledge is an important contrast to the educational standards movement, whose prime focus is possession of a body of knowledge. The requirements of working with the field demand attention to both application and skills.

The EFF project represents the first time there has been a concerted attempt to map the major adult roles. Although a great deal of work had been done around the worker role, much less had been done on the citizen and parent/family member roles. In these two roles in particular, EFF has made a useful contribution to specialist fields. For example, study of the "civil society" has been growing in recent years, and EFF's work on the citizen role adds greatly to our understanding of citizenship (for more discussion, see Merrifield, 1997).

Learning From the Process

The process of EFF has been one of the most extensive consultation and participation processes ever conducted in adult education. The vision is grand, but feet have been planted firmly on the ground through the ongoing involvement of learners and teachers.

Throughout these last five years, EFF staff have tried to keep a holistic view of where the project is going while at the same time working intensely on small pieces of the framework.

EFF staff now know a lot more about how to do this kind of project than they did at the beginning.

As the process has developed, some built-in tensions have become apparent. These are what Senge calls "creative tensions," which are not neatly resolvable but without which the project is neither interesting nor important. They are both EFF's strength and its greatest challenge.

One such tension is between creating the "big picture," a common framework within which everyone can find a space, and honoring and paying attention to the specific social context in which each individual learner lives and the particular purposes for each's learning. The more distilled the framework gets and the further from the role maps, the harder it is to stay in that social and purposeful context. Yet that context is where adults need to act, and it is what learning needs to address. EFF is seeking a different learning guide from the "skills in isolation" approach. The tension is the essence of the approach, but nonetheless hard to manage.

The tension between big picture and particular learning needs is paralleled by the tension between creating an accountability structure and supporting effective instruction. Effective teaching focuses on the small print of learners' interests and contexts—on what Sticht calls small growth steps. Accountability focuses on broad commonalities, common goals, and comparable achievements. The demands for detail are very different. Accountability structures require standards and performance indicators. Teaching requires processes and content. In trying to work on both together and create links across them, EFF's task is infinitely more challenging. But in the common ground lies the potential for systemic change.

Throughout these last five years, EFF staff have tried to keep a holistic view of where the project is going while at the same time working intensely on small pieces of the framework. Responsiveness to constituents who have some stake in the outcome is essential, but means the whole is always being modified by the development of the parts. This is an iterative approach to theory building that has been widely accepted in social science *(see discussion on pages 7 and 8 of naturalistic inquiry, grounded theory, action research, and inquiry)*. EFF adopted this approach in order to generate system reform that would be credible and acceptable to the field of practice, to stakeholders, and to policymakers.

The journey mapped in this report is only the beginning. Since 1997, EFF partners have drafted and field tested content standards, and are now working on identifying performance levels. This work will be reported in the next research report. Fifteen states are now actively pursuing EFF as an accountability framework that will help them link program improvement and learner progress.

EFF's most significant accomplishment has been to shift thinking about the purpose of adult education. From a conception that adult education's work is to replicate K-12 education and teach knowledge and skills that are autonomous and independent, EFF has pushed us toward thinking of adult education as preparing people for the future by teaching skills and knowledge needed to be more effective workers, parents, and citizens. Equipped for the Future is a unique and remarkable effort to mold adult education for the next century.

Footnotes

[1] In 1993 when this project started, the present Goal 6 was actually Goal 5, and students were invited to comment on Goal 5. In 1994 Congress added two more goals to the original list, which resulted in renumbering. The wording was not changed. To avoid confusion we will refer here only to Goal 6.

[2] The Association for Community Based Education, Laubach Literacy Action, Literacy Volunteers of America, the National Association of State Directors of Adult Education, the Student Coalition for Adult Literacy Education, and United Way of America's Literacy Initiative.

[3] Only LLA provided its database to NIFL; the other organizations undertook to distribute themselves. We do not know if each of the 6,000 reached a discrete program—there is likely to be duplication among the various mailing lists. If 6,000 reached students, with 1,500 responses the response rate would be 25 percent. If the 6,000 mailings reached programs, with 149 programs responding the response rate would have been 2.5%. Given possible duplication between lists, and some distributors who did not follow through, the real response rate is likely to have been much higher.

[4] Technical support for the analysis phase was provided by the Graduate School of Education and Human Resources at the George Washington University. Dr. Ray Rist, Director of the Center for Policy Studies, an experienced qualitative researcher, headed the research team, along with Dr. Gregg Jackson, who worked with the coding team in identifying and refining themes, and Dr. David Wizer, who oversaw technical aspects of using Ethnograph software to manage the data analysis. Four GWU graduate students were coders, and Dr. Sondra Stein from NIFL completed the team.

[5] This team read approximately 80% of the initial data. Files were exchanged so that they were read by more than one team member. Discussions of possible themes took place at staged intervals.

[6] The coding team was the four GWU graduate students, under the supervision of Dr. Jackson, and working closely with Dr. Stein.

[7] In the guide used by coders, each sub-category is illustrated by sample statements that exemplify it and provide guides on what should be included.

[8] Goal 6 reflects two of these (citizen and worker), and policy interest in the third—parent/family member—is demonstrated in the Even Start legislation addressing family literacy, the America Reads federal initiative and revisions of the Adult Education Act (the 1998 Workforce Development Act). The adult learner consultation made clear the importance of the parent/family member role in people's lives and purposes for learning—in fact, children and families were the center of their lives. They wanted better jobs to give their families a better life. They wanted better communities to

have a better place for their children to grow up. This role could not be left out of adult education.

[9] **Citizen role:** synthesized by the Center for Literacy Studies, drawing on data from Southern Appalachian and New England Civic Participation Project; Philadelphia Mayor's Commission on Literacy—Adults as Citizens; Minneapolis Public Schools; CONSABE, San Diego, CA; Maine Statewide Standards Development; and Adult Numeracy Practitioners' Network.
Worker role: synthesized by Performance Consulting Inc., drawing on data from SCANS, O*NET, NJAS, North Carolina Literacy Resource Center; Minneapolis Public Schools; CONSABE, San Diego, CA; Maine Statewide Standards Development; and Adult Numeracy Practitioners' Network. Reviewed for consistency with O*NET by Michael Campion, Graduate School of Management, Purdue University.
Parent/Family Member role: synthesized by National Center for Family Literacy, drawing on data from NCFL project; Minneapolis Public Schools; CONSABE, San Diego, CA; Maine Statewide Standards Development; and Adult Numeracy Practitioners' Network.

[10] Characteristics may add to more than total when individuals declared more than one affiliation, and may add to less than total when participants did not declare demographic data..

[11] Some programs offer both ABE and ESOL, so total adds to more than the number of programs.

[12] See Appendix D for May, 1999 definitions of each of these generative skills.

[13] In the standards review process it was determined that "lead" did not hold up as a separate and assessable skill. Participants in the field and expert review process recommended that we maintain the Common Activity "Provide Leadership," supported by a range of interpersonal, decision-making, and lifelong learning skills.

[14] Revised April, 1999, as a result of the standards review process.

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APPENDIX A. 1995-96 Planning Projects: Focus Group Participation

1. Adult Numeracy Practitioners Network.
Looked across all three adult roles, but focused on the numeracy aspects of each. The process involved nearly 300 individuals in seven states. These included 21 learner focus groups in seven states (six each in Illinois and Virginia, four in Oregon, two in Ohio, one each in New Hampshire, Vermont and Rhode Island). 171 adult learners participated, all enrolled in adult education mathematics classes.

The learners participating were:
- 59% were female.
- 71% were urban.
- 50% were white; 26% were African American; 12% Hispanic; 7% Asian and 3% Native American.
- 69% were parents.
- 60% were unemployed.
- Almost half (49% were participating in GED classes, 26% in adult basic education, and 25% in ESL, workplace and developmental college classes. Three focus groups were held in correctional facilities.

In addition to the adult learner focus groups, five stakeholder focus groups were held, convening stockholders from Illinois, Massachusetts, Ohio, Oregon and Virginia. Most of the 61 stakeholders were involved in adult education, training or employment—state and municipal administrators, college and university personnel, staff developers, publishers and employers.

Data were also collected from a "virtual" study group of mathematics teachers, graduate students and researchers from the US and other countries who communicated via an electronic discussion network.

Five teacher study groups involved 41 teachers from the four states of Illinois Ohio, Oregon and Virginia as well as the New England Regional Math Group which included teachers from all six New England states. These teachers came from a variety of settings: community colleges, correctional facilities, local education agencies, and community-based organizations.

A Working Group consisted of representatives from each of the regions participating in the project, which already had active math teams connected to ANPN.

2. National Center for Family Literacy
NCFL partners convened a total of 29 focus groups involving 223 individuals in five states—Arizona, Washington, Louisiana, Kentucky and Tennessee. These included 12 learner focus groups, six stakeholder groups, three groups which combined stakeholders and practitioners, seven practitioner groups, and one mixed focus group.

The learners participating were:
- 94% female.
- 28% white, 30% African American, 24% Hispanic,

16% Native American, and 1% Asian/Pacific islander.
- 19% were employed.
- 42% were married.
- 69% were native English speakers.
- 82% spoke English primarily at home.

The stakeholders participating in the focus groups were:
- 85% female.
- 52% white, 16% African American, 5% Hispanic, 8% Native American and 1% Asian/Pacific islander.
- They had been involved in adult education from 1 to 39 years, with a mean of 8 years.
- Their age range was from 19 to 69, with a mean of 43 years.

3. Southern Appalachian and New England Civic Participation Project.

The two partners in the Civic Participation Project—the Center for Literacy Studies at the University of Tennessee and the New England Literacy Resource Center—convened two Working Groups (one in each region) and conducted a total of eight focus groups and eight inquiry projects, involving a total of 172 people. Focus groups were conducted in Kentucky, Virginia, Tennessee, Vermont, and Massachusetts, and in addition to participants from these states involved people from Rhode Island, New Hampshire, and Maine (a total of eight states).

The focus groups included adult literacy and ESOL practitioners, policy makers, stakeholders, learners, and people active in civic life in various ways—members of grassroots community organizations, state and local elected officials, volunteers, social services and health care providers. They were:
- 57 women and 28 men.
- 69 white and 16 people of color.

The inquiry projects were unique to the Civic Participation Project. These were designed to explore the meaning of civic participation in the lives of adult learners and their teachers, and to begin to document the ways in which the topic is incorporated into ABE and ESOL classrooms. They involved a teacher and class of students at each of 8 adult education programs in Tennessee, Virginia, Rhode Island and Massachusetts. In each project the teachers and students explored the meaning of civic participation over 10-12 class sessions, and produced documentation in terms of discussion notes, student writings, drawings and teacher journals. The Appalachian inquiry projects also developed an action step, in which the teacher and students identified an issue about which they were concerned and took some action. Close to the end of the projects a CPP staff member conducted a group interview with each class about what they had learned, and to capture their reflections on the skills and knowledge they had needed to take action.

4. Maine State-Wide Standards Development

Maine looked across all three adult roles, and worked across the state. Maine's work to develop state-wide standards for adult basic education had begun before the Equipped for the Future project, and linked with it through adoption of the four purposes from the 1995 report as the guiding framework. As part of the planning project, Maine convened five focus groups with a total of 60 participants. These included one stakeholder focus group, one adult education director group, one adult education teacher group, and three learner groups. In addition, Maine used data from a 1995 Summer Institute of adult education practitioners (input from 185 people), and convened an Interagency Working Group of representatives from state agencies and organizations involved in adult education, employment and training, economic and community development, and business and political life.

5. CONSABE: Content Standards for Adult Basic Education (San Diego, California)

The CONSABE project was developed by CWELL, the San Diego Consortium for Workforce Education and Lifelong Learning, based at San Diego Commu-

nity College. Seven focus groups were convened in San Diego to look across all three adult roles. These involved a total of 69 people: these included three groups of ABE students, one group of ABE teachers, two involving stakeholders from the business, government and education communities, and one of graduate students at San Diego State University. Participants were:

- 35 adult learners, 25 stakeholders, 9 constituents.
- 31 males and 37 females.
- age range from 16-21 up to 45+, with most in the 31-45 age group.
- 31 white, 17 Hispanic, 14 African American, 14 Asian/Pacific Islander and 1 Native American/ Alaskan.

6. Philadelphia Mayor's Commission on Literacy: Adults as Citizens

MCOL focused on the citizen role, and worked within the city of Philadelphia. They convened a Working Group of stakeholders from diverse constituencies—business, adult education and other educational agencies, government agencies, organized labor, organized religion, funders and social service agencies. Three in-class discussion/research sessions were held with learners to explore meaning and actions around citizenship.

A total of seven focus groups were conducted, involving 29 individuals. These were composed of individuals from the following stakeholder sectors: learners, educators, business and labor leaders, policy makers, funders, community leaders and clergy, government and media. The first five focus groups discussed personal citizenship experiences and what knowledge and skills were needed for them to be successful, and also reviewed and gave feedback on draft written standards which had been prepared using existing published literature. Two subsequent focus groups were conducted to enhance input on citizenship without providing input on the draft standards. Finally, an expert review of the revised draft standards was conducted by a panel of professionals in education, civic education and policy.

7. Minneapolis Public Schools

Coordinated by the Adult Literacy Program of the Minneapolis Public Schools, this project looked across all three adult roles within the city of Minneapolis. A Working Group was convened with representatives from adult education and training, business and labor, community organizations, and social services. Twenty focus groups were convened: 12 groups of adult learners (106 individuals). These were:

- 38% African American, 26% Southeast Asian, 11% white, 10% Native American, 7% African, and 5% Hispanic.
- ranging in age from teens to 60s, with two thirds in teens and 20s.
- 66% female.

In addition, eight stakeholder groups were held (76 people)—two each of employment counselors and teachers, employers, community groups, and ABE/ESL teachers. These were:

- 78% white, 10% African American, 10% Hispanic, 1% Southeast Asian and 1% African.

8. North Carolina Literacy Resource Center: Worker Role

The North Carolina Literacy Resource Center engaged a 22 member Work Group composed of basic skills/literacy providers and program administrators, policy makers and one learner to oversee the project. It was an active group that met six times during the year (once in a two-day retreat), was involved in the design and conduct of data collection activities and the analysis of data.

The project invited participation of the basic skills/literacy community, employers and the general public in a series of focus groups designed to explore responsibilities of adults as workers and to examine skills and knowledge needed by adults in their worker role.

Seven day-long focus groups were held around the state. Work Group members were involved in set-

ting these up, recruiting participants, and facilitating activities. In addition, Work Group members hosted five further events: two focus groups with Hispanic learners at a community college (one conducted in Spanish); one focus group with learners and one with employers at Goodwill Industries; a short focus group with student editors of a Literacy South publication. A total of 229 people attended these meetings:

- 89 from community colleges.
- 36 from community based literacy organizations.
- 25 from other agencies (including Dept. of Social Services, Head Start, Employment Security Commission).
- 17 represented employers.
- 62 were learners (mostly in the extra focus groups at the end).

Demographic data on participants were not reported.

APPENDIX B. Structured Feedback Process, 1996-97

WORKER ROLE

STATE	NO. OF SESSIONS	NO. OF PARTICIPANTS	ORGANIZATIONAL AFFILIATIONS	KEY SERVICES & SECTORS	DEMOGRAPHICS
Maine	6	64	Business & industry: 50 Voluntary/comm. orgs.: 4 Education/acad.: 13	Retail food: 29 Other services: 11 Education: 9	Male/female: 23/41 White/Asian: 62/1 Aged 18-25: 9 26-35: 11 36-49: 26 50+: 10
North Carolina	5	46	Business & industry: 31 Education: 15 Govt.: 1	Fabrication/ machine: 10 Electronics mfg: 7	Male/female: 21/23 White/African American/ other: 30/12/1 Aged 18-25: 2 26-35: 12 36-49: 19 50+: 13
Ohio	5	57	Business & industry: 40 Labor: 10 Education: 21	Fabrication/ machine: 28	Male/female: 19/0 White/African American/ Hispanic: 47/6/2 Aged 18-25: 1 26-35: 10 36-49: 31 50+: 13
Vermont	6	129	Business & industry: 40 Union: 3 State govt: 2 Education/Acad.: 67 Community/voluntary org:7	Health care: 40	Male/female: 22/94 White/other: 123/2 Aged 18-25: 4 26-35: 25 36-49: 69 50+: 30
Pennsylvania	1	25	Business & industry: 4 Union: 25 Govt: 11 Education/Acad.: 1 Community/voluntary org:10		Male/female: 0/25 White/African American/ other: 9/15/1 Aged 18-25: 1 26-35: 12 36-49: 12 50+: 0
Virginia	5	50	Business & industry: 43 Union: 8	Poultry processing: 11 Food mfg.: 18 Food processing: 10 Grocery/retail: 10	Male/female: 16/34 White/African American: 31/19 Aged 18-25: 6 26-35: 10 36-49: 27 50+: 7
TOTAL	**28**	**371**			

CITIZEN ROLE

STATE	NO. OF SESSIONS	NO. OF PARTICIPANTS	ORGANIZATIONAL AFFILIATIONS	DEMOGRAPHICS*
California	2	30	Interagency Council for Adult Education (representatives from corrections, labor, education, community colleges, libraries).	Male/Female: 8/15 Afro American/Caucasian/ Hispanic/ Other: 2/10/8/3 Aged 18-25: 0, 26-35: 1, 36-49: 13, 50-64: 6, 65+: 0
Connecticut	1	10	Job Center staff, educators, community volunteers, Community Development Board, Urban League.	Male/Female: 2/8 Afro American/Caucasian/ Hispanic: 2/5/3 Aged 18-25: 0, 26-35: 1, 36-49: 3, 50-64: 5, 65+: 0
Kentucky	1	11	Ag. Extension, Kentuckians for the Commonwealth citizen organization, Kentucky Farm Alliance, Urban Council, state agencies, adult learning center director.	Male/Female: 3/7 Afro American/Caucasian: 2/9 Aged 18-25: 0, 26-35: 0 36-49: 4, 50-64: 6, 65+: 1
Massachusetts	3	18	MA Coalition for Adult Education (practitioners), community organizations, Latino community organizations.	Male/Female: 4/12 Cauc/Hisp/Other: 10/5/1 Aged: 18-25: 0, 26-35: 3, 36-49: 8, 50-64: 4, 65+: 0
New Hampshire	1	11	Educators, Latino community organization reps., American Friends Service Committee, community volunteers.	Male/Female: 5/6 Afro American/Caucasian/ Hispanic: 1/9/1 Aged 18-25: 0, 26-35: 0 36-49: 6, 50-64: 5, 65+: 0
New Mexico	1	21	Staff of migrant education, community college, and college preparation programs (national representation). Conducted in Spanish and English.	Male/Female: 0/2 Hispanic: 2 Aged 18-25: 0, 26-35: 0 36-49: 0, 50-64: 2, 65+: 0
North Carolina	1	10	Staff and learners in community education and GED preparation program for migrant workers.	Male/Female: 3/4 Hispanic: 7 Aged 18-25: 2, 26-35: 3 36-49: 1, 50-64: 1, 65+: 0
Pennsylvania	4	34	Businesses, labor, community organizations, human services, education, Asian-American community organizations, social service agencies, parent organizations.	Male/Female: 7/23 Afro American/Asian/ Caucasian/Other: 9/3/10/1 Aged 18-25: 0, 26-35: 2 36-49: 14, 50-64: 6, 65+: 0
Rhode Island	1	6	Urban League, Progreso Latino, South Providence Neighborhood Association, United Church of Christ, educators.	Male/Female: 2/3 Afro American/Caucasian/ Hispanic: 1/3/1 Aged 18-25: 0, 26-35: 2 36-49: 2, 50-64: 0, 65+: 1

** Not all participants responded or replied to all questions*

(Continued, next page)

CITIZEN ROLE, continued

STATE	NO. OF SESSIONS	NO. OF PARTICIPANTS	ORGANIZATIONAL AFFILIATIONS	DEMOGRAPHICS*
Tennessee	4	37	Urban League and other civic organizations, elected officials, government officials, business organizations, religious organizations, community organizations, parent organizations.	Male/Female: 8/29 Afro American/Caucasian: 7/30 Aged 18-25: 1, 26-35: 5 36-49: 16, 50-64: 10, 65+: 4
Texas	3	38	Workforce Commission, community organizations, businesses, Dept. of Corrections; Chamber of Commerce, religious organizations, migrant and community education; adult literacy practitioners and students.	Male/Female: 14/28 Afro American/Asian/ Caucasian/Hispanic/ Other: 3/3/24/12/1 Aged 18-25: 0, 26-35: 4 36-49: 24, 50-64: 15, 65+: 0
Vermont	1	9	Educators, school improvement coordinator, corrections official, VISTA.	Male/Female: 2/5 Caucasian: 6 Aged 18-25: 1, 26-35: 0 36-49: 5, 50-64: 1, 65+: 0
Virginia	2	23	Community organization members (including some ABE students and GED graduates); Activists in environmental, African American and other community organizations, educators, business leader, staff of state elected official, League of Women Voters.	Male/Female: 2/21 Afro American/Caucasian/ Other: 3/18/1 Aged 18-25: 2, 26-35: 3 36-49: 11, 50-64: 6, 65+: 0
TOTAL	**25**	**257**		** Not all participants responded or replied to all questions*

PARENT/FAMILY MEMBER ROLE

STATE	NO. OF SESSIONS	NO. OF PARTICIPANTS	ORGANIZATIONAL AFFILIATIONS	DEMOGRAPHICS*
Arizona (Tucson and Mesa)	2	29	Family literacy program participants and other parents.	Male/female: 4/25 Caucasian/Am. Indian/ Hispanic: 4/4/21 Aged 18-25: 5, 26-35: 9 36-49: 15, 50+: 0
Wisconsin (Madison (2) and Waukesha)	3	37	Parents from parent education classes, ABE and community college classes.	Male/female: 5/32 Caucasian/African American/ Asian/Hispanic: 27/6/2/2 Aged 18-25: 3, 26-35: 13 36-49: 14, 50+: 7
Texas (Houston)	2	26	Parents from the community.	Male/female: 4/22 Caucasian/African American/ Asian/Am. Indian/Hispanic: 5/6/1/4/10 Aged 18-25: 4, 26-35: 7 36-49: 10, 50+: 5

(Continued, next page)

PARENT/FAMILY MEMBER ROLE, continued

STATE	NO. OF SESSIONS	NO. OF PARTICIPANTS	ORGANIZATIONAL AFFILIATIONS	DEMOGRAPHICS*
Virginia (Roanoke and Richmond)	2	35	Parents from the community	Male/female: 4/31 Caucasian/African American/ Asian: 22/12/1 Aged 18-25: 2, 26-35: 7, 36-49: 15, 50+: 11
Louisiana (Bossier City)	1	17	Parents from the community	Male/female: 2/15 Caucasian/African American: 12/5 Aged 18-25: 0, 26-35: 8, 36-49: 9, 50+: 0
Kentucky (Louisville)	2	15	Teenage parent program participants and non-parents	Male/female: 1/14 Caucasian/African American: 12/3 Aged 18-25: 5, 26-35: 4 36-49: 5, 50+: 1
New Mexico (Gallop)	1	15	Family literacy teachers and parents from Native American community	Male/female: 3/12 Caucasian/Am. Indian/Hispanic: 4/9/2 Aged 18-25: 0, 26-35: 2, 36-49: 11, 50+: 2
Pennsylvania (Philadelphia)	1	21	Parents from the community and others	Male/female: 1/20 Caucasian/African American: 4/17 Aged 18-25: 5, 26-35: 13, 36-49: 1, 50+: 2
Tennessee (Nashville)	2	41	ABE participants	Male/female: 2/39 Caucasian/African American/ Am. Indian: 27/13/1 Aged 18-25: 0, 26-35: 10 36-49: 18, 50+: 13
TOTAL	**16**	**236**		

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APPENDIX C. Documentary Sources for Skills and Knowledge Database, 1997

Citizen Role

American Bar Association Special Committee on Youth Education for Citizenship (1995), *Essentials of Law-related Education: A Guide for Practitioners and Policy-makers.* Chicago: American Bar Association, Division of Public Education.

Center for Civic Education (1994), *National Standards for Civics and Government,* CA: Author.

Lappe, Frances Moore and DuBois, Paul Martin (1994), *Quickening of America: Rebuilding Our Nation, Rethinking Our Lives.* San Francisco: Jossey Bass.

Massachusetts Department of Education (1995), *Habits of Mind: The Massachusetts Social Studies Framework.* Boston: Author.

Mayor's Commission on Literacy (1996), *Content Standards for Adults as Citizens.* Philadelphia, PA: Author.

National Assessment of Educational Progress (nd.), *Civics Framework for the 1998 National Assessment of Educational Progress.* Washington DC: National Assessment Governing Board.

EFF data from 1995-96 planning projects.

Reports of teachers in the 1997 inquiry projects.

Parent/Family Member Role

Covey, Stephen (1995), *The Seven Habits of Highly Effective Families.* Covey Leadership Center.

Curran, D. (1983), *Traits of a Healthy Family.* New York: Ballantine Books.

Geismar, L. L. et al. (1972), *Early Supports for Family Life: A Social Work Experiment.* PLACE: The Scarecrow Press.

Geismar, L. L. and Camasso, M. (1993), *The Family Functioning Scale: A Guide to Research and Practice.* New York: Spring Publishing Co.

MotherRead (1989, revised 1995), *Child Development Themes.* Raleigh, NC: Author.

MotherRead (1995), *Teacher's Guide: Empowerment Themes.* Raleigh, NC: Author.

National Center for Family Literacy, (1994) *Quality Self Study (Quality Indicators).* Louisville, KY: Author.

National PTA (1997), *National Standards for Parents and Family Programs.* Washington DC: Author.

Parents as Teachers (1993), *Program Planning and Implementation Guide.* Author.

RMC Research Corporation (1995), *Guide to Quality Even Start Family Literacy Programs.* Washington DC: U.S. Department of Education.

EFF data from 1995-96 planning projects.

Worker Role

American Chemical Society (1994), *Foundations for Excellence in the Chemical Process Industries.* Washington DC: Author.

American Electronics Association (1994), *Setting the Standard: A Handbook on Skills for the High-Tech Industry.* Santa Clara, CA: Author.

Anthony P. Carnevale, Leila Gainer, Ann Meltzer (1990) *Workplace Basics: The Essential Skills Employers Want.* San Francisco: Jossey-Bass Publishers.

Council on Hotel, Restaurant and Institutional Education (1995) *National Performance Criteria in the Lodging Industry.* Washington, DC: Author.

Foundation for Industrial Modernization (1994) *National Occupational Skill Standards for Computer Aided Drafting and Design (CADD).* Washington, DC: Author.

National Coalition for Advanced Manufacturing (1995), *National Skill Standards Project for Advanced High Performance Manufacturing.* Washington, DC: Author.

National Council of Teachers of Mathematics (1989), *Curriculum and Evaluation Standards for School Mathematics.* Reston, VA: NCTM Commission on Standards for School Mathematics.

National Retail Institute (1994), *Raising Retail Standards.* Washington, DC: Author.

National Tooling and Machining Association (1995), *Duties and Standards for Machining Skills: Level I, Level II.* Ft. Washington, MD: Author.

Secretary's Commission on Achieving Necessary Skills (1992) *What Work Requires of Schools: A SCANS Report for America 2000.* Washington DC: U.S. Department of Labor.

U.S. Department of Labor (1995), *O*NET Project Summary.* Washington DC: Author.

Elaine Jackson (1994) *Non-Language Outcomes in the Adult Migrant English Program. Sydney,* NSW: National Centre for English Language Teaching and Research.

EFF data from 1995-96 planning projects.

APPENDIX D. Equipped for the Future Skill Description for Standards

EFF COMMUNICATION SKILLS

Read With Understanding
- Determine the reading purpose.
- Select reading strategies appropriate to the purpose.
- Monitor comprehension and adjust reading strategies.
- Analyze the information and reflect on its underlying meaning.
- Integrate it with prior knowledge to address reading purpose.

Convey Ideas In Writing
- Determine the purpose for communicating.
- Organize and present information to serve the purpose, context, and audience.
- Pay attention to conventions of English language usage, including grammar, spelling, and sentence structure, to minimize barriers to reader's comprehension.
- Seek feedback and revise to enhance the effectiveness of the communication.

Speak So Others Can Understand
- Determine the purpose for communicating.
- Organize and relay information to effectively serve the purpose, context, and listener.
- Pay attention to conventions of oral English communication, including grammar, word choice, register, pace, and gesture in order to minimize barriers to listener's comprehension.
- Use multiple strategies to monitor the effectiveness of the communication.

Listen Actively
- Attend to oral information.
- Clarify purpose for listening and use listening strategies appropriate to that purpose.
- Monitor comprehension, adjusting listening strategies to overcome barriers to comprehension.
- Integrate information from listening with prior knowledge to address listening purpose.

Observe Critically
- Attend to visual sources of information, including television and other media.
- Determine the purpose for observation and use strategies appropriate to the purpose.
- Monitor comprehension and adjust strategies.
- Analyze the accuracy, bias, and usefulness of the information.
- Integrate it with prior knowledge to address viewing purpose.

EFF DECISION-MAKING SKILLS

Use Math To Solve Problems And Communicate

- Understand, interpret, and work with pictures, numbers, and symbolic information.
- Apply knowledge of mathematical concepts and procedures to figure out how to answer a question, solve a problem, make a prediction, or carry out a task that has a mathematical dimension.
- Define and select data to be used in solving the problem.
- Determine the degree of precision required by the situation.
- Solve problem using appropriate quantitative procedures and verify that the results are reasonable.
- Communicate results using a variety of mathematical representations, including graphs, charts, tables, and algebraic models.

Solve Problems and Make Decisions

- Anticipate or identify problems.
- Use information from diverse sources to arrive at a clearer understanding of the problem and its root causes.
- Generate alternative solutions.
- Evaluate strengths and weaknesses of alternatives, including potential risks and benefits and short- and long-term consequences.
- Select alternative that is most appropriate to goal, context, and available resources.
- Establish criteria for evaluating effectiveness of solution or decision.

Plan

- Set and prioritize goals.
- Develop an organized approach of activities and objectives.
- Actively carry out the plan.
- Monitor the plan's progress while considering any need to adjust the plan.
- Evaluate its effectiveness in achieving the goals.

EFF INTERPERSONAL SKILLS

Cooperate With Others

- Interact with others in ways that are friendly, courteous, and tactful and that demonstrate respect for others' ideas, opinions, and contributions.
- Seek input from others in order to understand their actions and reactions.
- Offer clear input on own interests and attitudes so others can understand one's actions and reactions.
- Try to adjust one's actions to take into account the needs of others and/or the task to be accomplished.

Advocate and Influence

- Define what one is trying to achieve.
- Assess interests, resources, and the potential for success.
- Gather facts and supporting information to build a case that takes into account the interests and attitudes of others.
- Present a clear case, using a strategy that takes into account purpose and audience.
- Revise, as necessary, in response to feedback.

Resolve Conflict and Negotiate

- Acknowledge that there is a conflict.
- Identify areas of agreement and disagreement.
- Generate options for resolving conflict that have a "win/win" potential.
- Engage parties in trying to reach agreement on a course of action that can satisfy the needs and interests of all.
- Evaluate results of efforts and revise approach as necessary.

Guide Others

- Assess the needs of others and one's own ability to assist.
- Use strategies for providing guidance that take into account the goals, task, context, and learning styles of others.
- Arrange opportunities for learning that build on learner's strengths.
- Seek feedback on the usefulness and results of the assistance.

EFF LIFELONG LEARNING SKILLS

Take Responsibility for Learning

- Establish learning goals that are based on an understanding of one's own current and future learning needs.
- Identify own strengths and weaknesses as a learner and seek out opportunities for learning that help build self-concept as a learner.
- Become familiar with a range of learning strategies to acquire or retain knowledge.
- Identify and use strategies appropriate to goals, task, context, and the resources available for learning.
- Monitor progress toward goals and modify strategies or other features of the learning situation as necessary to achieve goals.
- Test out new learning in real-life applications.

Reflect and Evaluate

- Take stock of where one is: assess what one knows already and the relevance of that knowledge.
- Make inferences, predictions, or judgments based on one's reflections.

Learn Through Research

- Pose a question to be answered or make a prediction about objects or events.
- Use multiple lines of inquiry to collect information.
- Organize, evaluate, analyze, and interpret findings.

Use Information and Communications Technology

- Use computers and other electronic tools to acquire, process, and manage information.
- Use electronic tools to learn and practice skills.
- Use the Internet to explore topics, gather information, and communicate.

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